Southwest Region EMS & Trauma System Development Plan
FY 04-05

I. AUTHORITY

A. **RCW 70.168.015(7):** "Emergency medical services and trauma care system plan" means a state-wide plan that identifies state-wide emergency medical services and trauma care objectives and priorities and identifies equipment, facility, personnel, training and other needs required to create and maintain a state-wide emergency medical services and trauma care system. The plan also includes a plan of implementation that identifies the state, regional and local activities that will create, operate, maintain and enhance the system. The plan is formulated by incorporating the regional emergency medical services and trauma care plans required under this chapter..."

B. **EMSTS Mission:** To establish, promote and maintain a system of effective emergency medical and trauma care services. Such a system provides timely and appropriate delivery of emergency medical treatment for people with acute illness and traumatic injury, and recognizes the changing methods and environment for providing optimal emergency care throughout the state of Washington.

II. INTRODUCTION

A. **Summary of proposed changes within this Regional Plan which require specific Department approval:**
(1) recommended numbers of Department-approved verified prehospital services within the region;
(2) recommended numbers and/or levels of Department-designed trauma services and/or rehabilitation services within the region;
(3) current Department-approved regional Patient Care Procedures and/or County Operating Procedure appendices to current Department-approved regional Patient Care Procedures;
(4) request(s) for Department approval of regional council-adopted higher-than-state minimum standard(s), for implementation within the region.

(1) None
(2) None
(3) Recently Council-adopted PCPs attached. The only change is the inclusion of Cowlitz County COPs
(4) None

B. **Executive Summary***:*

The Southwest Region EMS & Trauma Care Council is the forum for development of the regional trauma care and emergency medical systems. Since 1991 the Council, in its *Southwest Region Trauma System Development Plan,* has determined the goals and objectives for excellent trauma care in the Region. This eighth revision of the Plan continues the effort of the Council periodically to refine the trauma care and emergency medical systems and respond to its obligations to the Department of Health, Office of Emergency Medical Services and Trauma System, Olympia Washington. This plan derives from the Council's consensus on how the Region should structure trauma and emergency medical care within the bounds of the most recent interpretations of RCW and WAC by the Office of Emergency Medical Services and Trauma System.

Year 2000 US Census data shows that the population of all the Region's counties has grown remarkably over the past decade. Clark County achieved the greatest population growth among all Washington counties. The following table shows population growth based on preliminary Census data for each of the Region's counties.

County	Percent population increase
Clark	45.0
Cowlitz	13.2
Klickitat	15.3
Skamania	19.1
Pacific	11.1
Wahkiakum	14.9

Compared to 1990, the Region's Trauma and EMS providers are now caring for an additional 124,741 residents as well as an influx of tourists and part-year residents.

The Region's commitment to a cohesive system including improved public access, Emergency Medical Dispatch and prehospital response, and definitive care and rehabilitation remains unchanged. Continued experience with transport issues in the Region's more rural parts has led the Council to recommend including hospitals in neighboring regions and Oregon as appropriate destinations in some circumstances and to cooperate with the South Central Region in helping agencies on the Region's eastern border to meet their needs.

The Region remains committed to prompt initial care and transport of major trauma patients to appropriate designated trauma centers by prehospital providers with trauma training. The Plan provides for effective interfacility transfer of major trauma patients to the highest level of trauma care appropriate for their injuries. The Council reaffirms the following general principles for the five components of the EMS & Trauma System, first set in 1991 and revised in subsequent Plan editions:

Injury Prevention and Public Information/Education

- Decrease the incidence of trauma in the Region through a well designed and appropriate injury prevention program

Pre-hospital

- Assure rapid and appropriate access to the regional trauma system through a region-wide 911 system

- Assure essential emergency medical dispatcher, prehospital, and hospital trauma care training

- Maintain specialized trauma verified first response and transport vehicles to respond to all major trauma incidents in the Region

- Recommend that a minimum of 6 and a maximum of 62 aid services be trauma verified; that a minimum of 6 and a maximum of 35 ambulance services be trauma verified; and that a minimum of 1 and a maximum of 2 helicopter ambulance services be trauma verified.

- Design and implement emergency medical dispatch (EMD) standards and develop standardized EMD training programs that incorporate activation of the trauma system.

- Assure optimal trauma care for trauma victims in the Region.

- Ensure rapid transportation of trauma patients, by trauma-verified ambulances and/or air ambulance, to the appropriate health care facility.

- Revise and improve trauma-related prehospital, hospital, and transfer procedures.

- Develop trauma stress teams that respond to trauma incidents and help victims and families of victims of trauma.

- Balance the cost of trauma care and the trauma system against the cost to society of failure to provide such a system.

Designated Trauma Care Services

- Recommend designation of one Level II, one Level III, three Level IV, and up to two Level V trauma centers in the Region.

- Work with Oregon trauma providers to assure an appropriate transfer to higher care and appropriate rehabilitation services.

Data Collection and Submission

- Encourage timely submission of prehospital data to hospital trauma registrars for submission to DoH.

EMS and Trauma System Evaluation

- Revise and improve the Region's quality assessment and improvement program to monitor the regional system and to identify areas for improvement and research.

- Work with Medical Program Directors to ensure that standards and recommendations in this Plan are enacted.

- Develop a regional oversight process to ensure that system changes proposed in the Region are consistent with this Plan.

In all cases, in its goals, objectives, and recommendations, this Plan considers the patient's needs as the primary criteria guiding the development of the Southwest Region's EMS and Trauma Care Systems. By ensuring the skilled transportation of the right trauma patient to the right trauma center at the right time, as well as effective inter-facility transfer and eventual rehabilitation, the Southwest Region strives to meet those needs.

SYSTEM OPERATION COMPONENTS

III. INJURY PREVENTION & PUBLIC INFORMATION/EDUCATION

The purpose of the Southwest Region's IPPE program for FY 2003-2004 (July 1, 2003 to June 2004) is to reduce injuries and deaths associated with trauma and to increase public awareness regarding targeted injury-related problems in the region. Data used to select these problems come from published reports at the state, regional, and local levels.

A. REGIONAL INJURY PREVENTION PROGRAM
The following Regional IPPE projects and activities will be implemented or supported during this fiscal year. They include:

- **Fall Factors** injury prevention pilot project. This new program will be introduced in the Clark county area and expanded into other rural areas as needed and interest allows. The site for the program has yet to be determined.

- **DUI Traffic Safety** related injury prevention projects. On-going support for Trauma Nurses Talk Tough, WTSC Zero Tolerance Campaign, SWAY/Southwest Washington Advocates for youth hospital visitation program.

- **Continued coalition support** and/or development of DUI, Falls, and Suicide, prevention projects for the underserved counties of the Southwest Region (*Cowlitz, Klickitat, S. Pacific, Skamania, and Wahkiakum.*)

- **Safety Lids Save Kids Bicycle Helmet project** to include helmet distribution and fittings in the context of coordination with law enforcement agencies, established coalitions, EMS and trauma care providers, health fairs, and bicycle safety rodeos.

- **Promoting and providing ready-to-go injury prevention programs** and educational materials, resources and referrals through marketing efforts and communication via IPPE stakeholders, for example, SWAY, TNTT, Sober Roadways, Tread to Safety, Remembering When, Bicycle & Scooter Safety, and Suicide prevention materials and resources.

The primary strategies for addressing these issues will be continued coalition support, education, community relations, marketing and media efforts, and outside mini-grant funding to counties.

1. Issues/needs/weakness statement:

OVERVIEW

The need for increased injury prevention and public information and education support is great in the region. As our six counties have grown, demand for such information and programs has grown. Unfortunately, the Council budget for prevention and education programs is relatively small (approximately $65,500 per biennium) and has not kept pace with the increased demand for IPPE programs. After paying for a full-time IPPE coordinator and related overhead, remaining funding for IPPE program support is further limited. However, buy-in support for IPPE programs remains quite high, however. At present, over twenty-seven injury prevention partners work, actively, with the IPPE prevention coordinator and the subcommittee of the regional council. Both the prevention partners and the IPPE subcommittee are listed in Table 1.

TABLE 1 Southwest Region IPPE Partners and Committee Members

_____

County EMS Councils
Regional Councils
Fire Departments
EMS agencies
American Medical Response (AMR)
Civic Groups (Optimist, Hazel Dell Elk's, Vancouver Rotary)
Clark County Public Safety Educators (PSEC)
Southwest Washington Independent Forward Thrust (SWIFT)
Community Foundation for Southwest Washington
American Trauma Society, Washington Chapter
Southwest Region Quality Assessment & Improvement Forum
Clark County Bicycle Advisory Committee
Southwest Washington Medical Center
St. John's (Peace Health) Hospital
Clark County Bicycle Safety Coalition
Clark County Commissioners
Columbian Newspaper
The Reflector
Lower Columbia Safe Kids Coalition (Cowlitz County)
Klickitat County –Coalition Against Youth Trauma (CAYT)
S. Pacific County –IPPE Coalition
Wahkiakum County IPPE Coalition
Safe Kids Coalitions
State Farm Insurance
Farmer's Insurance
Burgerville, USA
Walmart Corporation
Washington Traffic Safety Commission
Hidden Charitable Trust

SOUTHWEST REGION IPPE COMMITTEE

Robert Yoesle, Chair, Klickitat Valley Hospital
Denise Haun-Taylor, Southwest Washington Medical Center (SWMC)
Sonya Goodrich, SW EMS & Trauma Care Council
Tim Dawdy, Clark County FPD #12
Klickitat Valley Ambulance Service –currently vacant seat
Wahkiakum Co. Health Department -currently vacant seat

REGIONAL NEEDS

The primary need for IPPE programs in the region is more money. As mentioned, the region continues to grow and demand for services continues to increase, yet funding remains stagnant. Grant funding has provided some level of additional support for ongoing programs, however, with the current economic situation, grant funding is becoming more difficult to obtain and grant sources more difficult to access.

REGIONAL WEAKNESSES

A relatively new weakness that has been identified in the region is a reduction in support for IPPE programs from the larger fire services. This is not due to lack of interest on their part, but due to budget and human resource cutbacks within their departments. Thus, large departments with high call volume are not available or able to participate in injury prevention programs. As well, it appears that IPPE is not a high priority within paid fire departments, where it does appear to be more a priority within volunteer and part-paid departments.

A secondary weakness is that large geographic size and increase population of the Southwest Region (six counties) results in a small amount of funding available for each county's IPPE programs. This dilution results in a reduction in both quality and quantity of programs being supported and/or delivered.

Third, as grant resources become limited, the region is now forced to compete for private grant funding against organizations and programs that we support or partner with. As a result, we are finding ourselves more and more in competition with our own coalition members and/or prevention partners.

REGIONAL DATA
Table 2: Types of injuries in the SW Region, 1996 thru 2000

Fatal Injuries	Count	Rate/100,000
Suicide	313	14.2
Motor Vehicle (occupant)	212	9.6
Non-medical poisoning	127	5.8
Falls	108	4.9
Drowning	57	2.6
Pedestrian	45	2.0
Suffocation and obstruction	28	1.3
Fire, Burns and related asphyxia	16	0.7
Struck by or against	12	0.5
Firearms	10	0.5
Bicycle (rider)	5	0.2
Bites, stings & other effect of animals	1	0.0
Total	**934**	

Non-Fatal Injuries	Count	Rate/100,000
Falls	4,305	191.3
Suicide/Self-inflicted poising	1,062	47.2
Motor Vehicle (occupant)	649	28.8
Non-medical poisoning	489	21.7
Struck by or against	271	12.0
Bites, stings & other effect of animals	108	4.8
Bicycle (pedal-cyclist/other)	105	4.7
Motor Vehicle (motorcyclist)	101	4.5
Fire/Flame/Hot Object/Substance	84	3.7
Motor Vehicle (Pedestrian)	73	3.2
Suffocation & Obstructing	52	2.3
Firearms	25	1.1
Drowning	17	0.8
Total	**7,341**	

Source: Department of health, Center for Health Statistics, 2000

SIGNIFICANT INJURY PROBLEMS AND HIGH RISK GROUPS IN THE SOUTHWEST REGION

When examining the data related to injury prevention programs within the region, the most significant problemS related to fatal injuries are: suicide, motor-vehicle occupants, non-medical poisoning, and falls. The most significant non-fatal problems are: falls, suicide, motor vehicle (occupant)**,** and non-medical poisoning. However, IPPE problems are often dealt with by various agencies, each with a specific expertise dealing with high-risk groups. For example, suicide is dealt with by both state and county mental health professionals and related suicide prevention programs. Such programs are expensive, dealing with complex issues that require expertise beyond that available by the regional council and/or within the constraints of the funding available. Thus, at this time, until suicide falls under EMS's jurisdiction, the region has decided not to pursue this "at risk" group as a primary method of getting the most value for its limited budget. Instead, the region uses The Washington State Youth Suicide

Prevention program as a reference and is developing a region-wide resource directory that will identify and other suicide prevention programs, and partners as part of our coalition building process (See program five, below).

The occupants of motor vehicles represent the second leading cause of fatal injuries and the third leading cause of non-fatal injuries in the region. As with suicide, the prevention of such programs does not fall under the jurisdiction of EMS. This is a problem addressed at the state level by Washington Traffic Safety Commission and Washington State Patrol, and locally by law enforcement. However, like suicide, the region supports the efforts of both state and local law enforcement motor vehicle injuries with such programs as Southwest Washington Advocates for youth (SWAY) DUI panels, Zero Tolerance Team, and Trauma Nurses Talk Tough (TNTT). The regional council acts as a partner and resource for these agencies, within its limited budget and human resource constraints.

Falls represents the most significant EMS problem in the region, representing the largest number of non-fatal injuries, by far (4,305 falls between 1996-2000) and an increase noted in 2001 data received from the Department of Health, March of 2003 (4,466 falls between 1997-2001), and the fourth leading cause of fatal injuries (313 deaths between 1996-2000) however a slight reduction in fatal falls is noted in (1997-2001 of 127 deaths) in the Region. As well, most of these falls are in a high-risk, fragile group of individuals 65 years and older. This IPPE program has become one of the region's major focuses during the fiscal year 2003-2004.

SPECIFIC PROJECT GOALS AND OBJECTIVES

FALLS REDUCTION PROJECT

FALLS REDUCTION STRATEGY: Develop a pilot project in Clark County for residents 65 and older providing free, falls hazard home assessments, education, and safety risk reduction devices, as appropriate.

Objective 1: During the current biennium, sponsor one or more train the trainer workshops to fire department personnel and interested EMS providers as documented by a curriculum and rosters of those attending the training sessions.

Objective 2: Assess 50 homes in the Clark County area for fall home hazards on a standard form and summarize the data from the assessments. Fire department personnel will provide free home risk assessment/evaluations, and installations of the risk reduction devices (RRDs) in qualified homes based on referrals from local hospitals. Measurement will be accomplished by creating a database that tracks initial contacts with residents and follow-up contacts quarterly by use of telephone, mail, or personal visits. The measure will be the percentage of residents complying with the reduction of risk hazards in their homes. A second measure will be the number of risk reduction devices installed in the fall-participant's home. As this is a new program, the evaluation method for this program during this initial fiscal year will be the number of homes actually inspected and any minor home modifications made to meet the objective of this program.

Objective 3: Pay for training assistance through the Central Region EMS IPPE Coordinator, Alan Abe as demonstrated by summary records of the training support.

FALLS PROJECTED COSTS: $15,000

FALLS PROJECT BARRIERS: High cost of liability insurance for this program. Lack of full support by large fire services in the Region.

TRAFFIC SAFETY PROJECTS

TRAFFIC SAFETY PROJECT OBJECTIVES:
Objective 1: Reduce alcohol related fatalities within the Region by targeting the most vulnerable population of licensed drivers (males 16-25) for motor vehicles crashes.

Objective 2: Sponsor educational events that target traffic safety and/or educational programs that may help reduce DUI traffic related deaths by focusing on the most vulnerable population of licensed drivers (16-25) for MVC.

Strategy 1: Continue traffic safety programs to S. Pacific, Wahkiakum, Klickitat, and Skamania counties by conducting by June 30, 2005 twelve Trauma Nurses Talk Tough presentations, at least one in each county of the Region as demonstrated by a standard curriculum and documentation of the ages and number of students involved. Conduct a pre-test/post-test of knowledge and attitudes in the TNTT presentations for at least one accessible high school in the region, by June 30, 2005.

Strategy 2: By June 30, 2005, distribute 12 sets of teacher Zero Tolerance materials and/or DUI teaching packages to primary and secondary schools within the Region as demonstrated by a summary of materials distributed and a description of the recipients.

Strategy 3: Distribute 2,000 DUI brochures to student in the Region by June 30, 2005 as demonstrated by a summary of materials distributed and a description of the recipients.

Strategy 4: Regional injury prevention will assist in coordination of efforts with local injury prevention coalitions, local EMS councils and EMS providers to present at least one mock driving under the influence crash at local schools where the (TNTT) presentation will be delivered (S. Pacific, Wahkiakum, Klickitat, and/or Skamania counties) in FY 03-05 as demonstrated by documentation of the ages and number of students involved.

TRAFFIC SAFETY PROJECT COSTS: $10,000 ($9,000 expected from Washington Traffic Safety Commission)

TRAFFIC SAFETY BARRIERS: None noted, at present.

IPPE COALITON DEVELOPMENT

COALITION DEVELOPMENT OBJECTIVE: During this biennium, continue the support of coalition development and or/growth of the five coalitions established in each county of the Southwest Region and to assist them to identify and successfully address their specific injury prevention problems.

Strategy 1: Continue on-site needs assessment surveys and on-site visits to the five local injury prevention coalitions to help update and support current injury prevention programs and help identify problems. By June 30, 2005, count number of IPPE programs delivered at the local level (which were supported by the Regional IPPE program).

Strategy 2: Quantify, as best as possible, the level of interest for the continuation of DUI traffic safety related projects and/or falls prevention in each county of the Region and share the top four fatal and nonfatal causes of injury in each county to interested IPPE stakeholders.

Strategy 3: Deliver five Zero Tolerance Team DUI presentations during the fiscal year.

COALITION DEVELOPMENT PROJECTED COSTS: $500-$2000

COALITION DEVELOPMENT BARRIERS: Extremely low funding available; limited time for one regional IPPE coordinator to meet the needs of 60 to 80 potential IPPE partners in the six counties in the region. Ideally, programs such as the Zero Tolerance Team presentations should have pre-test/post-test evaluations. Already a high number of students have viewed these presentations (over 3,000 students). An evaluation component such as a pre-post test will be designed and implemented during this biennium with approval from the local schools.

BICYCLE HELMET SAFETY PROJECT

BICYCLE HELMET PROGRAM OBJECTIVE: Reduce the number of bicycle-related head injuries suffered by children and adults in the region by providing bicycle safety helmets, safety resource materials, and education to local providers, coalitions, and participants involved in the Bicycle Safety Campaign Safety Lids Save Kids.

Strategy 1: By June 30, 2005 distribute 600 helmets to programs and/or coalitions in FY 2003-2005 as demonstrated by providing the actual count of helmets distributed and properly fitted in the Region.

Strategy 2: By June 30, 2005, the region will track and record the number of presentations/meetings/coalition meetings attended within the region by providing a list of such activity.

Strategy 3: By June 30, 2005, track and record the number of brochures and education material distributed throughout the region as demonstrated by providing the actual count of educational materials distributed during the fiscal year.

Strategy 4: By June 30, 2005, continue to work with coalitions to help support their efforts in IPPE activities as demonstrated by counting and reporting the number and length of contact hours in support of coalitions with their IPPE programs and activities.

BICYCLE PROJECTED COSTS: $3,000 TO $7,000 (depending upon grant funding received)

BICYCLE BARRIERS: Low funding available.

IPPE SUPPORT PROJECT

The purpose of this project is to maintain a regional IPPE information resource center for the region.

IPPE SUPPORT OBJECTIVE: During the biennium, market the availability of IPPE programs and expertise available from the Regional Council to local IPPE partners, coalitions, and the general public, as required and/or needed.

Strategy 1: By June 30, 2005, participate in ten health fairs in the Region (two in Clark County, one in each of the other counties requesting attendance) during the fiscal year as demonstrated by providing a count of the number of health fairs attended in the fiscal year summary report.

Strategy 2: By June 30, 2005, display the IPPE mobile booth at health fairs, colleges, schools, hospitals, EMS agencies, public health departments, and other organizations as demonstrated by a count of residents receiving IPPE information at health fairs in the region, a count number of press releases, media kits, and media contacts made during fiscal year in each of the six counties in the region, count number of times IPPE booth is displayed at colleges, schools, open houses, EMS agencies, public health departments, and other organizations.

Strategy 3: By June 30, 2005, make available the IPPE mobile booth for partner organizations for their specific injury prevention and public education programs during the fiscal year.

Strategy 4: By June 30, 2005, continue to develop relationships with outside grant sources for additional injury prevention monies as demonstrated by formal applications to four grantors.

Strategy 5: By June 30, 2005 provide media with information regarding Regional Council functions and/or local IPPE activities occurring in a respective county.

Strategy 6: By June 30, 2005, provide injury prevention programs and train the trainer workshops as needed to continue the support of injury prevention coalitions and partners region-wide as demonstrated by a description and count of the Train the Trainer programs provided during each fiscal year.

PROJECTED COSTS: $500-$1,000

IPPE SUPPORT BARRIERS: Limited financial resources; none other perceived.

Southwest Region Data Analysis (1996-2000)

Data from 1996-2000 was summarized for the entire region. Data sources include:

- Comprehensive Hospital Abstract Reporting System (C.H.A.R.S.) by the Department of Health, Office of Hospital & Patient Data.
- Population totals from the Washington Office of Financial Management 1998 & 2000 State of Washington Data books.

In October of 2002, the State Department of Health released data about significant injury and trauma problems in the state of Washington and the (6) counties that comprise the Southwest Region; Clark, Cowlitz, Klickitat, S. Pacific, Skamania and Wahkiakum

- Comprehensive Hospital Abstract Reporting System (C.H.A.R.S.) by the Department of Health, Office of Hospital & Patient Data.

- Population totals from the Washington Office of Financial Management 1998 & 2000 State of Washington Data books.

The Washington State Injury Prevention Program and data source for the Center for Health Statistics, Comprehensive Hospital Abstract reporting System (CHARS) reports these top four injuries for each county in the Southwest Region 1996-2000.

Table 1: The top four causes of non-fatal and fatal injuries for the Southwest Region

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	91.3	1. MVT	12.3
2. Suicide	47.2	2. Suicide (firearm)	8.8
3. Motor Vehicle (occupant)	28.8	3. Poisoning (unintentional)	6.6
4. Non-medical poisoning	21.7	4. Falls	5.7

Table 2: The top four causes of non-fatal and fatal injuries for Clark County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	163.8	1. MVT	10.4
2. MVT	34.1	2. Suicide (firearm)	8.6
3. Suicide (poisoning)	33.9	3. Poisoning (unintentional)	6.9
4. Struck by or against	10.1	4. Falls	4.5

Table 3: The top four causes of non-fatal and fatal injuries for Cowlitz County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	316.1	1. MVT	16.4
2. Suicide (poisoning)	102.2	2. Falls	9.2
3. MVT	58.7	3. Suicide (Firearm)	9.0
4. Poisoning (unintentional)	40.6	4. Poisoning (unintentional)	7.4

Table 4: The top four causes of non-fatal and fatal injuries for Klickitat County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)	Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)

1. Falls	84.6	1. MVT	27.9
2. Suicide (poisoning)	25.7	2. Suicide (Firearm)	10.7
3. MVT	25.7	3. Falls	6.4
4. Struck by or against	9.6	4. Drowning	6.4

Table 5: The top four causes of non-fatal and fatal injuries for Pacific County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	439.8	1. MVT	17.9
2. MVT	58.3	2. Suicide (Firearm)	16.0
3. Poisoning (Suicide/Unintentional)	57.4	3. Falls	11.3
4. Suffocation & Obstruction	47.8	4. Drowning	8.5

Table 6: The top four causes of non-fatal and fatal injuries for Skamania County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	89.7	1. MVT	12.5
2. Suicide (poisoning)	37.6	2. Suicide (Firearm)	12.5
3. MVT	14.6	3. Falls	*
4. Struck by or against	*	4. Poisoning	*

Table 7: The top four causes of non-fatal and fatal injuries for Wahkiakum County

Non-Fatal Hospitalizations (1996-2000) Top Four Injuries (rate per 100,000)		Fatal Injuries (1996-2000) Top four deaths (rate per 100,000)	
1. Falls	316.9	1. Falls	*
2. MVT	77.9	2. Drowning	*
3. Suicide (poisoning)	62.3	3. Suicide (Firearm)	*

Population Change in Southwest Region, 1990-2000

According to the Washington Office of Financial Management (OFM) Clark County was the fastest growing county in the State of Washington with a 5.3 percent gain in population since the year 2000.

County	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Clark	238,053	248,435	256,011	267,748	277,670	290,111	304,348	317,324	327,818	337,625	345,238
Cowlitz	82,119	83,750	84,279	86,012	87,220	88,215	90,044	90,728	91,608	92,700	92,948
Klickitat	16,616	16,680	16,815	17,184	17,516	17,866	18,312	18,627	18,454	18,793	19,161
Pacific	18,882	19,146	19,522	19,726	20,306	20,496	20,874	20,813	20,932	20,979	20,984
Skamania	8,289	8,384	8,770	8,897	8,930	9,118	9,337	9,559	9,562	9,585	9,872
Wahkiakum	3,327	3,385	3,455	3,660	3,719	3,809	3,784	3,883	3,885	3,875	3,824
Total	367,286	379,780	388,852	403,227	415,361	429,615	446,699	460,934	472,259	483,557	492,027
% increase		3.40%	2.39%	3.70%	3.01%	3.43%	3.98%	3.19%	2.46%	2.39%	1.75%
11 yr % increase		33.96%									

Southwest Region Data Analysis (1997-2001)

In March 2003, the Department of Health released basic data tables showing mortality and hospitalization data about significant injury and trauma problems in the State of Washington.

For 1997-2001, the top four mechanism of unintentional injury are ranked below for the Southwest Region. A decrease (▾) or increase (▴) in rate is also shown.

Data from 1997-2001 was summarized for the entire Southwest Region. Data sources include:

- Comprehensive Hospital Abstract Reporting System (C.H.A.R.S.) by the Department of Health, Office of Hospital and Patient Data.

Table 1: The top four causes of non-fatal and fatal injuries for the Southwest Region (1997-2001)

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ▲	193.8	1. MVT (occupant) ▼	8.5
2. Suicide (poisoning) ▲	50.3	2. Suicide (firearm) ▼	8.4
3. MVT (occupant) ▼	26.1	3. Poisoning (**no change**)	6.6
4. Poisoning (unintentional) ▲	24.4	4. Falls ▼	5.5

Table 2: The top four causes of non-fatal and fatal injuries for Clark County

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ▲	169.6	1. Suicide (firearm) ▼	8.3
2. Suicide (poisoning) ▲	37.1	2. MVT (occupant) ▼	6.9
3. MVT (occupant) ▼	24.1	3. Poisoning ▼	6.4
4. Poisoning ▲	20.1	4. Falls ▼	4.3

Table 3: The top four causes of non-fatal and fatal injuries for Cowlitz County

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ▼	304.8	1. MVT (occupant) ▼	11.7
2. Suicide (poisoning) ▲	108.0	2. Falls ▼	8.9
3. Poisoning (unintentional) ▲	46.3	3. Suicide (firearm) ▼	8.4
4. MVT ▼	35.7	4. Poisoning (unintentional) ▲	8.2

Table 4: The top four causes of non-fatal and fatal injuries Klickitat County

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ▲	94.3	1. MVT (occupant) ▼	20.1
2. Suicide (poisoning) ▼	24.4	2. Suicide (firearm) ▼	9.5
3. MVT (occupant) ▼	14.8	3. Falls ▲	7.4
4. Poisoning & Burns ▲	8.5	4. Drowning (**no change**)	6.4

Table 5: The top four causes of non-fatal and fatal injuries for Pacific County

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ⬆	465.1	1. Suicide (firearm) ⬇	15.3
2. Suffocation & Obstructing ⬇	45.8	2. MVT (occupant) ⬇	14.3
3. MVT (occupant) ⬇	43.9	3. Falls ⬇	8.6
4. Poisoning ⬇	28.7	4. Burns/Flame/Hot Object ⬆	8.6

Table 6: The top four causes of non-fatal and fatal injuries for Skamania County

Non-Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ⬆	113.5	1. MVT (occupant) ⬇	12.4
2. Poisoning ⬇	14.4	2. *	
3. MVT (occupant) ⬇	12.4	3. *	
4. *		4. *	

Table 7: The top two causes of non-fatal and fatal injuries for Wahkiakum County

Non- Fatal Hospitalizations (1997-2001) Top Four Injuries (rate per 100,000)		Fatal Injuries (1997-2001) Top Four Deaths (rate per 100,000)	
1. Falls ⬆	327.0	1. Unintentional Injuries ⬆	36.3
2. MVT ⬇	62.3	2. Suicide ⬆	31.3

IV. PREHOSPITAL
A. **Communication**
1. **Issue/Need/Weakness Statement**:

a. Public Access (e.g., E911, etc.)
All counties are served by E-911 systems; there are no problems with citizen access.

b. Dispatch:
1) Training for dispatch personnel
Existing county communication facilities, usually supervised by the Sheriff's Office (Clark County has a true consolidated center for all emergency dispatching), operate most 9-1-1 centers in the Region. All counties except Klickitat train dispatchers in a formally recognized EMD program based upon the Medical Priority Dispatch System (MPDS®) program. The Klickitat County 9-1-1 center dispatchers are trained in and use PowerPhone®. The standard adopted by the Regional Council in 1991 provides that all emergency medical dispatchers be trained in a Region-approved 16-24 hour emergency medical dispatch (EMD) course. Each 9-1-1 center provides on-going training and Quality Assurance and Improvement (QAI), although Klickitat County's PowerPhone QAI process is less rigorous than

that of other counties. The Regional Council has provided MPDS® protocol card sets, initial training and on-going system support to MPDs and 9-1-1 centers within the Region.

Since EMS dispatch is not the primary function of many of the Region's 9-1-1 centers and because of costs and time associated with training, Klickitat County Sheriff's Office has been reluctant to adopt the Region's standard. Working with its 9-1-1 centers, the Region is committed to eliminating practical barriers to improvements in EMD. Significantly, on the Region's 2002 Survey, the Klickitat 9-1-1 Center received more fair or poor ratings from prehospital agencies than any other Center.

2) Dispatch prioritizing
   Two factors produce the need for assigning priorities to EMS calls–the need of providers to have accurate information about the nature of the call (as well as providing emergency first aid instruction to callers) and the need to match the proper resource with the call. The first factor is always present; the second becomes more important as call volume increases. In more rural areas, part of the resistance to priority dispatch systems results from the perceived absence of the second factor in low volume systems. Citing liability concerns, the Klickitat County Sheriff's Office has elected not to provide a limited priority dispatch system with PowerPhone. The Klickitat County Sheriff received advice from DoH indicating that the PowerPhone system he uses meets State requirements.

   Practice in priority dispatch will enable low volume systems to respond effectively in disaster and infrequent MCI situations. The Region's rationale for standardizing EMD rests on the awareness that strategy consists of practicing now what will be necessary eventually.

3) Provisions for bystander care with dispatcher assistance
   All centers provide first aid instruction to bystanders. A priority dispatch system allows extension of system first response to the advice provided to callers by dispatchers. Independent dispatch advice creates unnecessary liability for the EMS system. In the absence of professionally trained and immediately available initial responders, the only first aid available to patients may be based on advice to callers by dispatchers. This advice can influence the condition in which first arriving responders find the patient and the patient's ability to respond to therapy.

   The Region views priority dispatch systems as integral to good system medical control and appropriate care for patients. All 9-1-1 Centers in the Region provide some level of bystander instruction.

4) Any Patient Care Procedures (PCPs) or County Operating Procedures (COPs) developed to improve communications
   In the *Dispatch and Response Times* section, the Region's PCPs establish guidelines for training standards and levels of service to be dispatched for trauma calls. Again, Klickitat County Sheriff's Office sees no need to adopt the requirements outlined in the Region's PCPs.

c. Primary and alternative communications systems.
   Primary—The Clark County system uses an 800 mHz system. Cowlitz County agencies use UHF or VHF high-band depending on terrain. Klickitat and Pacific agencies use VHF high-band. Skamania County agencies use UHF and VHF High-band. Wahkiakum County agencies use VFH High-Band. The geography of the rural sections of the Region makes maintaining constant communication with the dispatch center and communication with medical control difficult or impossible. The establishment of trunked systems or repeater sites in mountainous terrain is expensive, as are alternatives like satellite communications.

   Secondary—All agencies have the common State Fire frequency available. In urban areas, cellular phones are available. Clark County's 800 mHz system is backed up by UHF and VHF systems. Thus, all agencies that provide mutual aid to one another have common communication capability.

d. A discussion of system operation during single patient, multiple-patient, mass casualty and disaster incidents, identifying ambulance to ambulance, ambulance to dispatch, and ambulance to hospital communications systems

Hospital to Ambulance Communications: HEAR

During the 1970s, DOH personnel established a VHF radio system in the state to allow EMS personnel to communicate with the Region's hospitals and health facilities. This system, called HEAR, was developed as an integral part of the state-wide EMS system. The HEAR system is used by all agencies within the Region to communicate with their respective hospitals. Although transport ambulances in the Region are equipped with the HEAR system, not all first response vehicles are. Additionally, all hospital emergency departments in the Region have access to HEAR for communications between facilities.

Ambulance to Ambulance Communications

HEAR can also be used for ambulance-to-ambulance communications. Many unit mobile radios also have the State-wide fire frequency. Additional discussion of this issue is addressed under item e, below.

Personnel Recall

All trauma-verified agencies in the Region use pagers in the recall of their personnel. The percentage of personnel with pagers varies, however, from agency to agency.

e. Roles of other public and private agencies, e.g., police to fire to ambulance.

The limitation of frequencies available to private, non-fire department ambulances is a problem that has been identified in the Region. Since these agencies are limited to their dispatch frequencies and to the HEAR system by their FCC licenses, they sometimes cannot communicate with first response ambulances, police and sheriff's departments, air-ambulances, and other agencies at the scene of a trauma incident. An additional problem is that agencies in adjacent jurisdictions may lack the ability to communicate with each other for mutual aid or multiple jurisdiction incidents. These communications problems require further study to determine their Region-wide impact; however, it appears that without a statewide or region-wide coordinated communications system, communications at multiple jurisdiction incidents will remain a problem, particularly within the rural areas. Establishing such a Regional system is expensive and requires many agencies to change communication equipment.

f. Evaluate communication system providers and dispatch activities using Table A. (Duplicate table for each provider)

Goal 1: Consistent with the PCPs, approved EMD programs in all the Region's dispatch centers.

Objective: By the end of this biennium, remove perceived fiscal and administrative barriers to implementing the PCP section on priority dispatching in all 9-1-1 Centers.

Strategies:
1. Establish a dialogue with Center administrators who see no value in adopting the Region's standard for EMD, and encourage implementation.

2. To budget sufficient funds to provide initial MPDS training for any Centers not yet adopting the Region's standard.

Cost: Projected costs for this training would be $10,000.00.

Barriers: If 9-1-1 Center administrators see no value in adopting the Region's standard, the Council has no way of insisting on compliance. Although the PCPs require a region- approved EMD system, according to the Local EMS Council, DoH has approved the use of an unapproved system in one County.

Objective 2: Fund initial and continuing EMD training for all 9-1-1 Centers in the Region.

Strategy: Provide $10,000.00 for EMD training.

Cost: To fully fund the training requested, the Council would need to budget $10,000.00.

Barriers: To fund initial and continuing training would mean decreasing training support to providers. A fixed amount of available funding will force the Council to evaluate the best return for its training support dollars. The Council will be unlikely to meet this objective in the face of other training obligations.

TABLE A

EVALUATION OF COMMUNICATION SYSTEM PROVIDERS
&
DISPATCH ACTIVITIES

Clark County

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes, all Clark EMS Agencies
3	Number of Employees	14
4	Number of Employees Not Trained	0
5	Kinds of Training	MPDS
6	Frequency of Training	Every six months
7	On-going Training & Certification	MPDS/NAEMD
8	Kinds of Protocols	MPDS
9	Medical Director Involvement	Yes
10	Dispatch Prioritizing	Yes
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	Yes, MPDS guidelines

Cowlitz County

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes
3	Number of Employees	6
4	Number of Employees Not Trained	0
5	Kinds of Training	MPDS
6	Frequency of Training	Yearly
7	On-going Training & Certification	MPDS/NAEMD
8	Kinds of Protocols	MPDS
9	Medical Director Involvement	Yes
10	Dispatch Prioritizing	Yes
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	MPDS guidelines

<div align="center">Klickitat County</div>

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes
3	Number of Employees	3
4	Number of Employees Not Trained	0
5	Kinds of Training	PowerPhone
6	Frequency of Training	Yearly
7	On-going Training & Certification	PowerPhone
8	Kinds of Protocols	PowerPhone
9	Medical Director Involvement	No
10	Dispatch Prioritizing	No
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	Limited to problem resolution

<div align="center">Pacific County</div>

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes
3	Number of Employees	3
4	Number of Employees Not Trained	0
5	Kinds of Training	MPDS
6	Frequency of Training	Six months
7	On-going Training & Certification	MPDS
8	Kinds of Protocols	MPDS
9	Medical Director Involvement	Yes
10	Dispatch Prioritizing	Yes
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	MPDS guidelines

Skamania County

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes
3	Number of Employees	3
4	Number of Employees Not Trained	0
5	Kinds of Training	MPDS
6	Frequency of Training	Quarterly
7	On-going Training & Certification	MPDS
8	Kinds of Protocols	MPDS
9	Medical Director Involvement	Yes
10	Dispatch Prioritizing	Yes
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	MPDS guidelines

Wahkiakum County

	Survey Questions	Dispatch Responses
1	Citizen Access	E-911
2	Consolidated Centers	Yes
3	Number of Employees	2
4	Number of Employees Not Trained	0
5	Kinds of Training	MPDS
6	Frequency of Training	Yearly
7	On-going Training & Certification	MPDS
8	Kinds of Protocols	MPDS
9	Medical Director Involvement	Yes
10	Dispatch Prioritizing	Yes
11	Bystander Care	Yes
12	Pre-arrival Instructions	Yes
13	Quality Assurance	MPDS guidelines

B. **Medical Direction of Prehospital Providers:**
1. **Issue/Need/Weakness Statement**:

"Patient outcome is influenced by early medical intervention, and therefore contemporary prehospital care systems are a well-defined practice of medicine. As such, one of the most important aspects of prehospital medicine is the oversight provided by the medically and legally responsible physician.[1]"

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[1] Racht, E. M., & Reines, H. D. Medical Oversight. In Keuhl, A. E. (ed*.), Prehospital Systems and Medical Oversight* (2nd ed., p. 181). St. Louis: Mosby Lifeline.

The roles and responsibilities of the medical program director in each county are spelled out in Revised Codes of Washington (RCW) and Washington Administrative Code (WAC). In all six counties within the Southwest Region, the MPDs provide medical control (both indirect and direct) by means of voice communications, written standing orders (Protocols), and regularly scheduled run reviews. As well, the MPDs provide legal authority for paramedics, EMTs, and first responders to administer care. MPDs within the Region work with the Regional Council to help develop and approve OTEP, Regional Training Programs, Patient Care Procedures, and guidelines for the transport of the sick and injured, and emergency medical dispatch.

In most counties, the MPD provides examinations for paramedics and ILS providers practicing within the county. They also recommend certification, recertification, and decertification of EMS personnel, where appropriate. The MPDs from each county are also part of the Quality Assessment and Improvement program within the Region.

Direct (on-line) medical control is available by physicians at both Southwest Washington Medical Center in Vancouver, and St. John Medical Center in Longview. EMS providers in the more rural areas often do not have constantly available on-line medical control and must rely on medical control by written protocols.

MPDs provide prospective, immediate, and retrospective indirect medical. Each county uses the same set of MPD protocols with minor variation. These basic protocols are based upon the indirect control model first developed in Clark County. Some variation exists among the counties and sometimes within each county, depending on the transport time involved.

Recent changes to the Washington Administrative Code (WAC) have clarified the structure of MPD protocols as they relate to the Region's Patient Care Procedures (PCPs). These changes have resulted in clearer guidance for MPDs in preventing conflicts between their protocols and the PCPs.

Current statutory criteria for MPD selection do not address formal preparation in EMS medical direction or administration. National standards for MPDs have emerged from the work of the National Association of EMS Physicians (NAEMSP) and other organizations. NAEMSP offers a formal training program for medical directors. In the current survey of the Region's MPDs, half indicated that they did not find the amount of education on EMS system direction inadequate.

Excellent medical direction requires great expenditures of time. Current funding permits only modest support for MPDs. MPDs in urban areas with tax-supported services find more adequate compensation for their time than do their rural colleagues. The Region's 2002 MPD Survey showed that MPDs in the more urban counties have funding through contracts with counties and agencies for which they provide direction. While call volumes and the provider corps are disparate between urban and rural counties, the time required for excellent medical direction is not proportionally disparate. An MPD supervising 32 providers does not have a workload that is less than 10% of the workload of an MPD supervising 450 providers. Until compensation for medical directors, particularly in rural areas, offsets the loss of compensation from regular practice, appropriate medical direction of the trauma system will not be institutionalized.

Formal Quality Assurance and Improvement (QAI) activities are difficult for MPDs in rural counties. QAI should be more than complaint resolution and medical record review. The Council believes that medical direction of the system should include regular review of system performance by data analysis coupled with establishing targets for system performance and sharing of QAI results with all providers in the system. The Council recommends that the Department offer additional support to MPDs in QAI design and execution.

Goal 1: MPDs are formally prepared to provide EMS Medical Direction.

Objective 1: During this biennium, the Council will recommend that the Department improve criteria for selecting MPDs, specifically that they define the requirement in WAC 246-976-920(1)(a) that MPDs be "knowledgeable in the administration and management of prehospital emergency medical care and services . . ."

Strategies
1. Develop a formal recommendation to DOH including a suggested MPD skill set.
2. Advocate for this change with the DoH.

Cost: DoH cost of the revision process.

Barriers: Without adequate financial support, increasing requirements for MPD certification may leave rural communities without medical direction.

Objective 2: During the biennium the Council will recommend that DOH reimburse rural MPD attendance at an NAEMSP Medical Director Course or hold a standard training program in conjunction with one of the State MPD Workshops.

Objective3: During the biennium the Council will recommend that the State either improve compensation for MPDs in counties where the State stipend is the MPD's only compensation or actively pursue a regional approach to medical direction that could achieve economies of scale.

Cost: The cost for each MPD would be the cost of the three-day course plus compensation for practitioners who must leave their practices to attend. For our region, this cost could approach $30,000.00.

Barriers: For the Region, there is no barrier to advocacy. For the State, the significant barrier to achieving this objective is fiscal.

C.   **Prehospital EMS and Trauma Services:**
1.   Issue/Need/Weakness Statement:
a. current EMS/TC personnel resources

The tables below show changes in the composition of prehospital personnel resources since the previous plan was written. In general the number of First Responders has decreased, while the number of EMTs and IV Techs has increased. We have seen a modest increase in the number of Paramedics and IV/AW Techs. On the Region's 2002 Survey, six volunteer agencies reported a net decrease in the number of its volunteers over the past biennium. All other agencies reported either static or increased number of volunteers. However, only one volunteer agency reported occasional inability to man all apparatus if called into service simultaneously. The continuing system need is to maintain adequate certified EMS personnel, paid and volunteer, to meet EMS service delivery demands throughout the Southwest Region.

Prehospital Personnel Resources as of June 30, 2001 Source: DoH OEMTP Licensing and Certification Division									
County	FR	EMT	IV	AW	IV/AW	ILS	ILS/AW	PM	Total
Clark	139	318	47	0	18	0	0	159	681
Cowlitz	76	150	41	0	2	0	0	30	299
Klickitat	59	51	1	0	2	0	1	14	128
Pacific	35	59	15	0	5	0	0	18	132
Skamania	13	23	3	0	1	0	1	7	48
Wahkiakum	3	35	5	0	0	0	0	3	46
Oregon	0	5	0	0	0	0	0	0	5
Total	325	641	112	0	28	0	2	231	1339

Current Prehospital Personnel Resources Source: DoH OEMTP Licensing and Certification Division									
County	FR	EMT	IV	AW	IV/AW	ILS	ILS/AW	PM	Total
Clark	70	327	46	0	13	0	0	170	626
Cowlitz	55	177	49	0	0	0	0	33	314
Klickitat	38	53	4	0	0	0	1	10	106
Pacific	35	56	16	0	3	0	0	14	124
Skamania	5	26	2	0	2	0	0	5	40
Wahkiakum	1	34	5	0	0	0	0	3	43
Oregon	0	7	0	0	0	0	0	0	7
Total	204	680	122	0	18	0	1	235	1260

b. prehospital training resources

College Based Programs

Clark College in Vancouver, offers EMT-B courses.

The Council is a member of a consortium with Clark College and the Northwest Regional Training Center that has lead to the development and accreditation of a Paramedic Training Program through the Training Center and Clark College.

Portland Community College, Portland, and Clatsop Community College, Astoria, both provide EMT certification courses at the (Oregon) EMT Basic) and EMT I Intermediate level. The College of Emergency Services, Oregon provides training to the paramedic level. Additionally, Oregon Health Sciences University (OHSU), Portland, provides a one-year certificate program in advanced paramedic training and began offering a four-year Bachelor's degree in paramedical sciences in 1996.

Linfield College, Portland Campus, introduced a Bachelor of Science degree in Health Sciences in September 1992. Oregon Health Sciences, University of Portland, Washington State University, and Linfield College all offer Bachelor of Science in Nursing degrees. OHSU offers a doctorate in medicine (M.D.) and began a bachelor's degree in physician assistant studies in 1997. Pacific University, Forest Grove Oregon (about one hour from Vancouver), began offering a Master of Health Sciences degree for physician assistants in June 1997. The Region, while strongly relying on Oregon educational institutions,

has strong educational support for all allied health care professionals within the Region. The greatest problem, however, is access to those programs by rural EMS providers.

The Council provides training support through a grant program available to all prehospital providers in the Region. The Council has established criteria that emphasize training for rural and volunteer agencies, as well as those who share training programs with other agencies.

On the Region's 2002 Survey, all agencies reported the availability of OTEP programs. The Region maintains a library of video and other training resources, including trauma training equipment, for use by Region providers.

c. prioritizing and conducting prehospital training

Agencies reporting training needs on the Regions 2002 Survey.

Type of training	Number of agencies
Basic prehospital trauma training	15
Basic EMS-C (PEPP or equivalent)	9
Initial First Responder	11
Initial EMT-B	13
Paramedic	3

The Council's priorities for awarding training support grants are:
1. Training to meet minimum criteria for licensure or verification
2. Agencies serving rural communities
3. Volunteer agencies
4. Agencies who open their training programs to other agencies

The region has a new focus on educating providers about the statistical risk of cardiac events during EMS service. The national trend of volunteers suffering cardiac events requires measures to reduce the strain on rural providers, including education on fitness and health risks. The most recent survey (2001) of the Region's volunteer agencies indicates that the second most common age range of volunteers is 36-45, the range in which deaths from cardiac events begins to increase dramatically.

d. Additional public safety personnel

Weyerhauser Corporation, as an affiliated provider, is available for assistance in MCI or disaster. National Park Service personnel and Search and Rescue personnel in the Mt. St. Helens National Volcanic Monument provide special capabilities for mountain rescue.

In addition to the Oregon resources noted in the Plan, other Oregon EMS resources are available to help manage MCI or disaster. In the eastern part of the Region, ambulance and fire-rescue services are available from The Dalles. Both ALS providers in Klickitat County are able to summon these resources through the County's communication center. A similar situation exists in Pacific County with regard to resources in Astoria, OR.

2. Goals

Goal 1: Regional Council grant-supported EMS training in the Southwest Region.

Objective1: Provide $50,000.00 dollars in each fiscal year of the biennium for grants to support training in rural, volunteer agencies with priority to supporting maintenance of licensure and verification.

Strategies:
 1. Budget action by council
 2. Use funding priorities in making grant decisions

Projected Cost: $50,000.00

Barriers: None

Goal 2: Reduction of occupational health risks to personnel of the Region's agencies.

Objective 1: During the biennium, provide health and risk reduction (back injuries, cardiovascular fitness) programs to agencies in the Region. Providers will be surveyed to assess the usefulness of the program.

Strategies:
1. Hold videotaped programs on health and risk reduction in emergency services in the Region's training library and survey agencies using the programs, and make them available to EMS agencies
2. Survey agencies using the programs for usefulness of the program.

Projected Cost: $500.00

Barriers: None

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D. Verified Aid and Ambulance Services:

1. Current Status:

a. Geopolitical defined areas providing EMS services

Clark County	
Urban	City of Vancouver Fire Department
	City of Camas Fire Department
Suburban	Clark County FPD 6 (Hazel Dell)
	Clark County FPD 11 (Battle Ground)
	City of Washougal Fire & Rescue
Rural	Clark County FPD 1 (surrounding Washougal)
	Clark County FPD 3 (Brush Prairie)
	Clark County FPD 9 (Camas)
	Clark County FPD 10 (Amboy)
	Clark County FPD 12 (Ridgefield)
	Clark County FPD 14 (La Center)
	North Country EMS (Yacolt) (Public EMS District)
	City of Woodland Fire Department (part)
Wilderness	None

Cowlitz County	
Urban	City of Longview Fire Department
Suburban	Cowlitz FPD 2 Fire and Rescue (Kelso)
Rural	City of Woodland Fire Department (part)
	Castle Rock Fire & Ambulance
	Cowlitz FPD 1 (Woodland)
	Cowlitz FPD 3 (Toutle Fire & Rescue)
	Cowlitz County FPD 4 (Ryderwood)
	Cowlitz FPD 5 (Kalama)
	Cowlitz FPD 7 (Ariel)
Wilderness	None

Klickitat County	
Urban	None
Suburban	None
Rural	Klickitat Valley Hospital Ambulance (Goldendale)
	Skyline Hospital Ambulance (White Salmon)
	Klickitat County FPD 1 (Trout Lake)
	Klickitat County FPD 2 (Bickleton/Cleveland)
	Klickitat County FPD 3 (White Salmon)
	Klickitat County FPD 4 (Lyle)
	Klickitat County FPD 7 (Goldendale FD)
	Klickitat County FPD 8 (Glenwood)
	Klickitat County FPD 9 (Roosevelt)
	Klickitat County FPD 10 (west of Prosser)
	Klickitat County FPD 12 (Klickitat)
	Klickitat County FPD 13 (Appleton)
	Klickitat County FPD 14 (Bingen)
Wilderness	None

(South) Pacific County	
Urban	None

Suburban	None
Rural	Long Beach FD/Amb Svc (Long Beach) (private NFP)
	City of Ilwaco Fire Department
	Naselle Fire Department (FPD)
	Pacific county FPD 1 (Ocean Park)
	Pacific County FPD 2 (Chinook)
Wilderness	None

Skamania County	
Urban	None
Suburban	None
Rural	Skamania County Public Hospital District 1 (Skamania County EMS)
	Skamania County FPD 4
	Skamania County FPD 6 (Cougar)
Wilderness	North Country EMS and Skamania County EMS (part)

Wahkiakum County	
Urban	None
Suburban	None
Rural	City of Cathlamet Fire Department
	Wahkiakum County FPD 2 (Skamokawa)
	Wahkiakum County FPD 3 (Grays River)
Wilderness	None

b. Need for and distribution of services

Clark County

AMR Northwest-Clark County
One agency provides ALS transport under franchise for Clark County except for the Cities of Camas and Washougal. The WAC criteria justify the need for this agency as follows:
Agency response—Densely urban traffic patterns require a service in the City in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Clark County includes Vancouver, WA, the fourth largest city in Washington with a population of 145,300. The city straddles I-5 and covers 44.66 square miles. Population density is 3253.32 per square mile.

City of Vancouver Fire Department
One agency provides ALS first response in the City. The WAC criteria justify the need for this agency as follows:
Agency response—Densely urban traffic patterns require a service in the City in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Vancouver, WA is the fourth largest city in Washington with a population of 145,300. The city straddles I-5 and covers 44.66 square miles. Population density is 3253.32 per square mile.

City of Camas Fire Department
One agency provides ALS tansport in the City. The WAC criteria justify the need for this agency as follows:

Agency response—Urban traffic patterns require a service in the City in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—The Columbia River borders the City on the South with attendant recreational injuries
Population density—Camas, WA has a population of 12,970. The city abuts the WA State Road 14 and covers 12.01 square miles. Population density is 1080.06 per square mile

Clark County FPD 6 (Hazel Dell)
This agency provides ALS first response in an unincorporated area north of and adjacent to Vancouver, WA. This district is mainly a suburban enclave of Vancouver. The WAC criteria justify the need for this agency as follows:
Agency response—Suburban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for suburban designation. The populace of the District has no other ALS or BLS first response.

Clark County FPD 11 (Battle Ground)
This agency provides ILS transport in the City of Battle Ground, WA. This district is mainly a suburban residential community near the center of Clark County. The WAC criteria justify the need for this agency as follows:
Agency response—Suburban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—Battle Ground is not geographically contiguous with other political jurisdictions.
Topography—N/A
Population density—The City of Battle Ground covers 3.87 square miles in the Center of Clark County. Battle Ground has a population of 10,040 and a density of 2594.36 per square mile. Residents of Battle Ground have no other ILS transport.

City of Washougal Fire and Rescue
One agency provides BLS First Response in Washougal, WA. This City is a mainly rural community on Washington State Road 14 east of Camas. The WAC criteria justify the need for this agency as follows:
Agency response—Suburban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography— The Columbia River borders the City on the South with attendant recreational injuries
Population density—The City of Washougal covers 4.69 square miles east of Camas, WA. Washougal has a population of 8,790 and a density of 1872.47 per square mile. Residents of Washougal have no other ILS transport.

Clark County FPD 1
This agency provides BLS first response in an unincorporated area adjacent to Washougal, WA. This district is a mainly rural District. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—The Columbia River borders the City on the South with attendant recreational injuries
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Clark County FPD 3 (Brush Prairie)

This agency provides BLS first response in an unincorporated area north and east of Vancouver, WA and south of Battle Ground, WA. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Clark County FPD 9 (Camas)
This agency provides BLS first response in an unincorporated adjacent to Camas, WA. This district is a mainly rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Suburban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Clark County FPD 10 (Amboy)
This agency provides BLS first response in an unincorporated area in north Clark County on Washington State Road 503 north of Yacolt, WA. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Clark County FPD 12 (Ridgefield)
This agency provides ALS first response in an unincorporated area in northwest Clark County adjacent to the Ridgefield National Wildlife Refuge and in Clark FPD 14 (La Center). La Center has a small casino that attracts residents of Clark, Cowlitz and other Counties. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—Proximity of a National Wildlife Refuge brings a population of visitors to the area.
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other ALS first response.

Clark County FPD 14 (La Center)
Merged with Clark County FPD 12, which provides ALS first response.

North Country EMS (Yacolt)
This agency provides ALS transport in the City of Yacolt and its unincorporated environs in north Clark County and southwest Skamania County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—This agency provides rescue service on Mt. St. Helens

Population density—Yacolt has a population of 1,065 and an area of 1.02 square miles. Population density for this entire response area meets the State definition for rural designation. The populace of the District has no other ALS transport.

Other factors—All-year recreation on Mt. St. Helens increases demand for service beyond what the residential population demands.

City of Woodland Fire Department

This agency provides BLS first response in the City of Woodland, WA and, under contract, in Clark County FPD 2. This district is mainly a rural community, part of which is in Cowlitz County. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Woodland covers 2.97 square miles and has a population of 3875. Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz County

AMR Northwest-Cowlitz County

This agency provides ALS transport for Woodland and the City of Longview as well as mutual aid for the rest of the County.

Agency response—Urban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—the Agency's response area includes Longview, which covers 14.58 square miles and has a population of 35,100. Population density is 2407.30 per square mile. The populace of the District has no other ALS transport.

City of Longview Fire Department

This agency provides BLS first response in Longview, WA. The city is an urban area west of I-5 and the largest city in Cowlitz County. The WAC criteria justify the need for this agency as follows:

Agency response—Urban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Longview covers 14.58 square miles and has a population of 35,100. Population density is 2407.30 per square mile. The populace of the District has no other BLS first response.

Cowlitz FPD 2 Fire & Rescue (Kelso)

This agency provides ALS transport in the City of Kelso, WA and surrounding unincorporated areas. This district is suburban community east of and adjacent to I-5. The WAC criteria justify the need for this agency as follows:

Agency response—Suburban traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Kelso has a population of 11,860 and covers 8.5 square miles. Its population density is 1395.11 per square. The populace of the Area has no other BLS first response.

City of Woodland Fire Department
This agency provides BLS first response in the City of Woodland, WA. This district is mainly a rural community part of which is in Cowlitz County. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Woodland covers 2.97 square miles and has a population of 3875. Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz FPD 1 (Woodland)
This agency provides BLS first response in an unincorporated area surrounding the City of Woodland. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz FPD 3 (Toutle Fire & Rescue)
This agency provides BLS first response in an unincorporated area east of I-5 in northwest Cowlitz County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz County FPD 4 (Ryderwood)
This agency provides BLS first response in an unincorporated area in northwest border of Cowlitz County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz County FPD 5 (Kalama)
This agency provides BLS first response in the City of Kalama and unincorporated areas east of I-5 in central Cowlitz County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—The City of Kalama covers 3.31 square miles and has a population of 1,840. The population density of the City is 556.31 per square mile and meets the State definition for rural designation. The populace of the District has no other BLS first response.

Cowlitz FPD 7 (Ariel)

This agency provides BLS first response in an unincorporated area east of I-5 on Washington State Road 503 adjacent to the Lewis River. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Population density for this area meets the State definition for rural designation. The populace of the District has no other BLS first response.

Klickitat County

Klickitat Valley Hospital Ambulance

This agency provides ALS transport to the City of Goldendale in central Klickitat County and surrounding unincorporated areas primarily to the east. The agency is essentially the ambulance service for parts of central and all of eastern Klickitat County. This ambulance service serves mainly a rural community. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—A low canyon runs North-South along Rock Creek separating the response area into halves. Winter conditions make crossing the canyon difficult.

Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

Skyline Hospital Ambulance Service (White Salmon)

This agency provides ALS transport to the City of White Salmon in central Klickitat County and surrounding unincorporated areas primarily to the east. The agency is essentially the ambulance service for parts of central and all of western Klickitat County. This ambulance service serves mainly a rural community. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

Klickitat County FPD 1 (Trout Lake)

This agency provides BLS first response to unincorporated Trout Lake in northwest Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:

Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.

Geography—N/A

Topography—N/A

Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 2 (Bickleton/Cleveland)
This agency provides BLS first response to unincorporated communities of Bickleton and Cleveland in northeast Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 3 (White Salmon)
This agency provides BLS first response to the City of White Salmon in southwest Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 4 (Lyle)
This agency provides BLS first response to the community of Lyle in southwest Klickitat County near the Klickitat River east of White Salmon, WA. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 7(Goldendale FD)
This agency provides BLS first response to the City of Goldendale in central Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 8 (Glenwood)
This agency provides BLS first response to the community of Glenwood in northwest Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A

Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 9 (Roosevelt)
This agency provides BLS first response to the community of Roosevelt in southwest Klickitat County near Wood Gulch. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 10
This agency provides BLS first response unincorporated areas of east Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 12 (Klickitat)
This agency provides BLS first response to the community of Klickitat in west central Klickitat County on Washington State Road 142 adjacent to the Klickitat River. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 13 (Appleton)
This agency provides BLS first response to the community of Appleton in west central Klickitat County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Klickitat County FPD 14 (Bingen)
This agency provides BLS first response to the community of Bingen in southwest Klickitat County just east of White Salmon, WA on Washington State Road 14. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A

Topography—N/A

Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

(south) Pacific County

Long Beach FD/Ambulance Service (private NFP)
This agency provides ALS transport to the City of Long Beach, WA in southern end of the Pacific County peninsula. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

City of Ilwaco Fire Department
This agency provides transport to the City of Ilwaco and its environs on the southwestern Pacific County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—The City of Ilwaco covers 2.33 square miles and has a population of 950. The population density of Ilwaco is 407.39 per square mile and meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Naselle Fire Department
This agency provides transport to the community of Naselle in south central Pacific County adjacent to the Naselle River and Washington State Road 401. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Pacific County FPD 1 (Ocean Park)
This agency provides ALS transport to the community of Ocean Park midway up the Pacific County peninsula and the north peninsula. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

Pacific County FPD 2 (Chinook)
This agency provides BLS first response to the community of Chinook in south Pacific County on US Hwy 101. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Skamania County

Skamania County Public Hospital District 1 (Skamania County EMS)
This agency provides ALS transport in all of Skamania County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

Skamania County FPD 4
This agency provides BLS first response southwest Skamania County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Skamania County FPD 6 (Cougar)
This agency provides BLS first response to unincorporated areas surrounding the community of Cougar, WA in west central Skamania County and parts of Clark County. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

North Country EMS (Yacolt)
This agency provides ALS transport in the City of Yacolt and its unincorporated environs in north Clark County and southwest Skamania County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—This agency provides rescue service on Mt. St. Helens

Population density—.Yacolt has a population of 1,065 and an area of1.02 square miles. Population density for this entire response area meets the State definition for rural designation. The populace of the Area has no other ALS transport.

Other factors—All-year recreation on Mt. St. Helens increases demand for service beyond what the residential population demands.

Wahkiakum County

City of Cathlamet Fire Department
This agency provides ALS transport in the City of Cathlamet and its unincorporated environs in southeast Wahkiakum County. This district is mainly a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Cathlamet covers 2.0 square miles and has a population of 560. the population density is 280,0 per square mile and meets the State criteria for rural designation. The populace of the City has no other ALS transport.

Wahkiakum County FPD 2 (Skamokawa)
This agency provides BLS transport to unincorporated areas surrounding the community of Skamokawa, WA in south central Wahkiakum. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Wahkiakum County FPD 3 (Grays River)
This agency provides BLS first response to unincorporated community of Grays River, WA in northwest Wahkiakum County on the Grays River and Washington State Road 4. This agency serves a rural community. The WAC criteria justify the need for this agency as follows:
Agency response—Rural traffic patterns require a service in the District in order to meet Regional minimum response times. This agency currently meets the Region standard.
Geography—N/A
Topography—N/A
Population density—Population density for this area meets the State definition for rural designation. The populace of the Area has no other BLS first response.

Regional Process for determining the need for and distribution of prehospital services.

All areas of the Region have adequate distribution of aid and transport services at ALS and BLS levels. Rural providers cooperate to be sure that requests for service in adjoining areas receive appropriate response when resources are limited. BLS rendezvous with ALS services is the norm. During the biennium 01-03 planning cycle, the Region is determining as precisely as possible the service areas for currently verified services.

During the biennium 03-05 planning cycle the Region will work with Local Councils to identify unserved or under-served areas. Council staff will give workshops at each County Council concerning the State's approach to basing need and distribution on criteria in statute and rule. The results of County Council assessments will be brought to the Regional Council for action in recommending changes to the minimum and maximum numbers of verified prehospital services. The Regional Council is guided in making recommendations by RCW 70.168.100(1) (h) and WAC 246-976-960(1)(b)(i). The Regional Council counsels Local County Councils in the use of DOH Biennial Plan Format – Attachment 1 - Criteria for Identifying Need and Distribution as a preliminary step in analyzing the need for adjusting min-max numbers within the region.

1. Issues/needs/weaknesses:
There is a need to further define under-served or unserved areas in the Region.

2. Goals
Goal 1: Defined unserved or under-served areas in the Region.

Objective 1: By the end of the current biennium, based on current service areas, the Local Councils will identify unserved or under-served areas in their counties to determine if min/max numbers for verified aid and ambulance services require adjustment in the next biennial plan.

Strategies:
1. Conduct one workshop at each Local Council to clarify this process and provide Staff assistance.
2. Present the DOH criteria for identifying need and distribution justification form and explain its use

Projected cost: Staff time only

Barriers: None

Table B

VERIFICATION

Clark County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	12	5	1	12
Aid - ILS	0	0	0	0	0
Aid - ALS	1	12	2	1	12
Amb-BLS	1	4	1	1	4
Amb - ILS	0	0	0	0	0
Amb - ALS	1	4	3	1	4

Cowlitz County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	5	4	1	5
Aid - ILS	0	0	0	0	0
Aid - ALS	1	5	0	1	5
Amb-BLS	1	5	1	1	5
Amb - ILS	0	0	0	0	0
Amb - ALS	1	5	4	1	5

Klickitat County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	8	8	1	8
Aid - ILS	0	0	0	0	0
Aid - ALS	1	7	0	1	7
Amb-BLS	1	4	2	1	4
Amb - ILS	0	0	0	0	0
Amb - ALS	1	2	2	1	2

Skamania County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	6	2	1	6
Aid - ILS	0	0	0	0	0
Aid - ALS	1	1	0	1	1
Amb-BLS	1	1	0	1	1
Amb - ILS	0	0	0	0	0
Amb - ALS	1	1	1	1	1

(south) Pacific County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	2	0	1	2
Aid - ILS	0	0	0	0	0
Aid - ALS	1	2	0	1	2
Amb-BLS	1	2	0	1	2
Amb - ILS	0	0	0	0	0
Amb - ALS	1	2	2	1	2

Wahkiakum County 01-31-03 Min/Max Numbers for Trauma-Verified Prehospital Services

Services	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
Aid - BLS	1	1	0	1	1
Aid - ILS	0	0	0	0	0
Aid - ALS	1	1	0	1	1
Amb-BLS	1	3	2	1	3
Amb - ILS	0	0	0	0	0
Amb - ALS	1	2	1	1	2

E. Patient Care Procedures (PCPs) and County Operating Procedures (COPs):
1. Current Status:
PCPS and COPS are Attachment A of the FY04-05 Plan

2. Issue/Need/Weakness Statement:
Any changes to the PCPs are posted on the Region's website and distributed by standard mail to all verified providers in the Region.

Other than issues regarding consistent application of emergency medical dispatching across all dispatch agencies mentioned above, the Council has identified no weaknesses in the developing and implementing its PCPs. The Council is working to advise Local Councils on the formulation of PCPs. Cowlitz and Wahkiakum Counties have authored COPs.

Goal 1: Provide assistance to Local Councils in developing COPs

Objective1: During the biennium, Council Staff will assist those Counties wishing to develop COPs by clarifying the relationship of COPs to the general PCPs, and, at the request of Local Councils, reviewing proposed COPs.

Strategy: Notify Local Councils of the availability of this service.

Costs: No cost is associated with this objective, other than Staff time.

Barriers: None

F. Multi county or county/inter-regional Prehospital Care:
1. Issue/Need/Weakness Statement:

On the Council's 2002 Survey, most providers indicated formal agreements for mutual aid with other agencies in their counties. All fire agencies participate in a general mutual aid agreement with other State fire agencies.

Clark County Regional Emergency Services Agency has entered into a Metropolitan Medical Response system (MMRS) agreement with providers in Oregon.

Klickitat County has a formal agreement with The Dalles for service in a small area of the County directly adjacent to The Dalles. In addition, in the eastern most portion of Klickitat County, Bickleton Fire Department works with Hospitals in Yakima County, which are closer than either of the Level IV Hospitals in Klickitat County. There are no formal inter-regional PCPs.

Wahkiakum County has a rendezvous-transportation agreement with AMR-Northwest for ALS transport of Wahkiakum patients to St. John's Medical Center or Southwest Washington Medical Center.

Geography makes it much more likely that the Region will seek assistance from and assist agencies in Oregon and north along the I-5 corridor than with Regions to the east.

Although individual mutual aid agreements exist, the current attention to address bioterrorist and weapons of mass destruction threats will require more comprehensive formal agreements among the Region's Counties. Current hospital planning efforts will serve as a model for future prehospital planning.

2. Goal
Goal 1: Development of Region-wide formal all-hazard planning among the Region's Counties.

Objective1: During the current biennium, Region staff will meet with local Emergency managers to determine if the recently developed Hospital Bioterrorism Plan can be generalized and expanded to an all-hazards approach throughout the Region.

Strategies:
1. The Region will seek funding through DoH to develop plans for major bioterrorist incidents applicable to all hazards.
2. Region staff will participate in the Region 4 Homeland Security Technical Committee

Cost: Initial Region-wide costs are projected at $30,000.00.

Barriers: Access to Federal grant funding by DoH and its use of Regional Councils as planning leaders under such grants. Different composition of Hospital Bioterrorism regions and EMS & Trauma regions.

V.   DESIGNATED TRAUMA CARE SERVICES

1. Issue/Need/Weakness Statement:

Following is a list of designated and recognized facilities in the Region:

Center	City	Level	Lic. Beds
SW Washington Medical Center	Vancouver	II	350
St. John's Medical Center	Longview	III	346
Skyline Hospital	White Salmon	IV	32
Kilickitat Valley Hospital	Goldendale	IV	31
Ocean Beach Hospital	Ilwaco	IV	25

Washington State designated centers outside the Southwest region

Providence Hospital	Yakima	III	
Yakima Memorial	Yakima	III	

Oregon Hospitals (recognized as part of the SW Washington Trauma System)

Legacy Emanuel Hospital and Health Center	Portland	I	340
Oregon Health Sciences University	Portland	I	341
Columbia Memorial Hospital	Astoria	III	37
Hood River Memorial Hospital	Hood River	III	32
Mid-Columbia Medical Center	The Dalles	III	49

Sources: State of Washington DOH, 1999; American Hospital Association, 1996

The proximity of two Level I facilities in Oregon influences the availability of specialty trauma care at the Region's Level II and III facilities. This fact has led the Council to decrease the minimum number of designated pediatric facilities to zero. Patients requiring specialty trauma care unavailable (certain methods of orthopedic injury fixation, burn care, and spinal cord injury) are promptly transferred to the Oregon Level I facilities.

Considering the routine transport of critical pediatric patients to Oregon Level I facilities, the designated and resource trauma facilities in the Region's plan meet the needs of injured patients.

Current system activity data indicate no deficiencies in the current schema of facility designation. The following graphs show data and trends in raw population based on US Census data and percentage increases in major trauma patients from CHARS and Trauma Registry data correlated to percentage population with trend projections. Although population as a percentage of 1995 population has increased dramatically, the accompanying increase in major trauma incidents has not been as precipitous. The increase in demand and distribution of patients indicates no need for additional designations. Years with asterisks are based on data not yet finalized.

SW Region Population 1995-2001 with five Year Projection
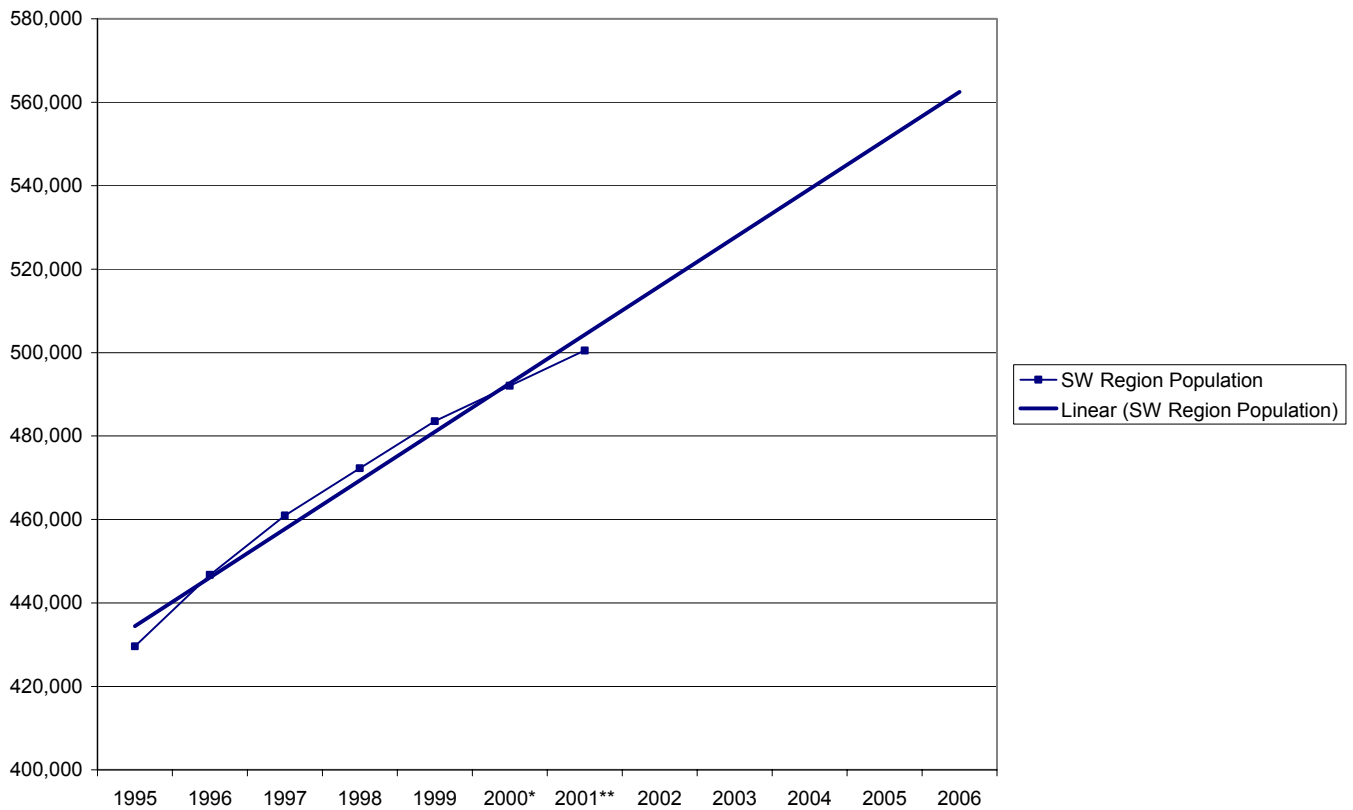
Percentage of Increase in Population and Major Trauma Response Rates
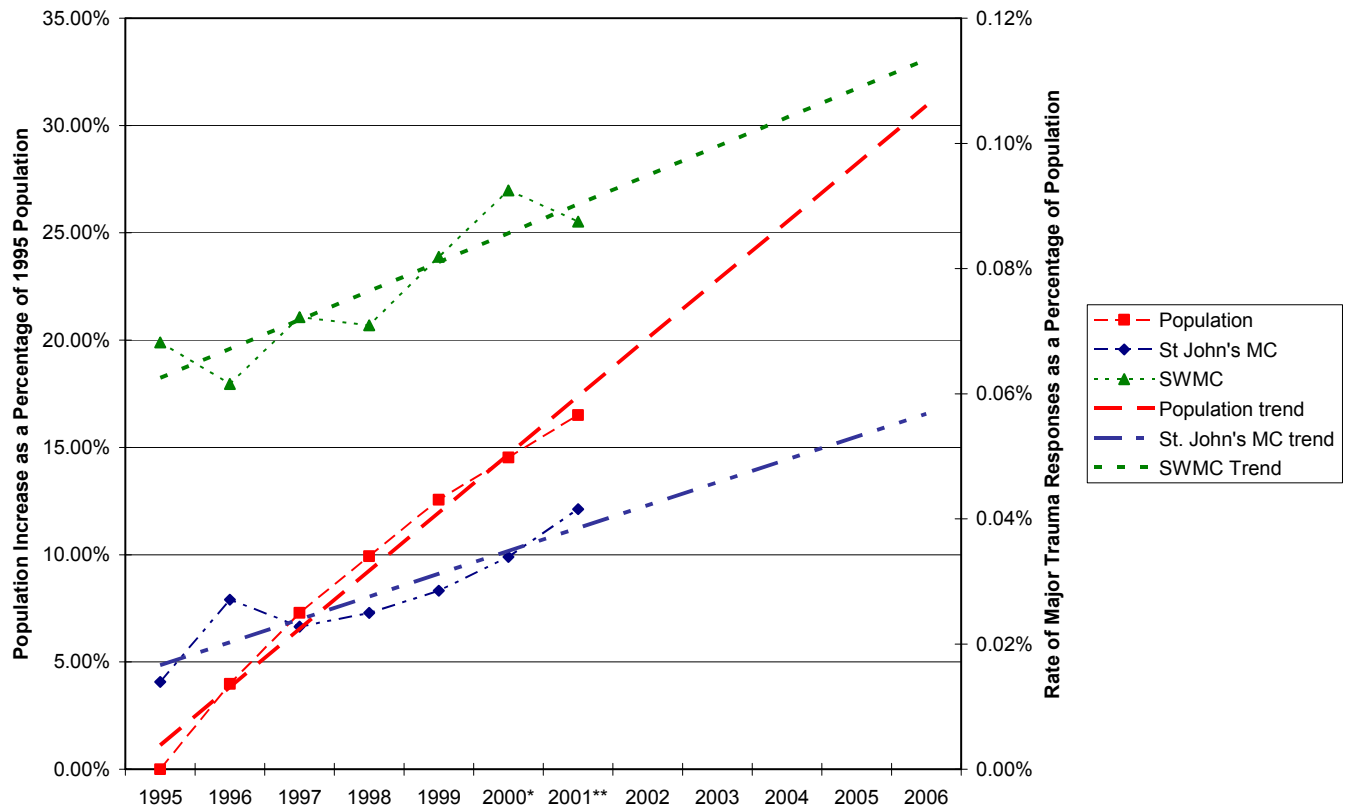
Goal 1: A system of designated trauma care services, and trauma rehabilitation services meets the Southwest Region's the trauma patient care needs.

Objective #1.
Use the Regional QI Committee to monitor system effectiveness and report needs to the Regional Council for system planning.

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C. **Designated general, pediatric and rehabilitation trauma facilities:**

TABLE C

Southwest REGION

FY 04/05 Regional Plan

Min/Max Numbers for Acute Trauma Services

LEVEL	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
II	1	1	1	1	1
III	1	1	1	1	1
IV	3	3	3	3	3
V	1	2	0	1	2
IIP	0	1	0	0	1
IIIP	0	1	0	0	1

Min/Max Numbers for Rehabilitation Trauma Services

LEVEL	STATE APPROVED		CURRENT STATUS	REGION PROPOSED (Indicate changes with an *)	
	MIN	MAX		MIN	MAX
II	1	1	1	1	1
III+	1	1	1	1	1

+ *There are no restrictions on the number of Level III Rehab Services*

VI. DATA COLLECTION AND SUBMISSION

1. Regional Council Role in transitioning data submission: The Region is assisting its agencies in resolving issues relating to the transition. Following clarification of the administrative power of the Region to collect data not specifically authorized by statute and administrative code, the Region modified its data collection policy to conform to State minimum standards. At minimum, Regional providers collect data on major trauma patients. Some providers collect data on a larger set of patients.

   The Region will do whatever it can to be sure that providers understand their responsibilities under the new system. When providers begin to give reports to facility trauma registrars, the Council will address problems as they arise, as indicated by oversight information from the Region QAI Committee. The Council is concerned that patients transported directly to Oregon resource facilities will not be reported to the State database. This issue is being resolved by action of the Region QAI Committee.

Goal 1: Trauma data collection is complete within the SW Region.

Objective 1: For each qualifying trauma run, EMS agencies submit trauma registry data elements to the receiving trauma service (center).

Objective 2: Trauma services (centers) input prehospital data on each qualifying EMS patient into trauma registry software.

Strategy: During FY03-04 provide one workshop on Collector for trauma registrars at the Region's designated trauma facilities.

VII. EMS AND TRAUMA SYSTEM EVALUATION (Including both prehospital and hospital components):

1. The Department of Health, the Regional Council, and the Level I, II, and III trauma centers have the collective responsibility and authority to evaluate trauma care system in the Region. As data is collected by trauma care providers and the State, the evaluation of the trauma system should be directed toward reducing controllable (not random) variations in system quality and implementing a region-wide Quality Assessment and Improvement (QA&I) effort directed at process evaluation and improvement.

Council staff is assisting the Region QAI Committee to develop a newsletter for the regions providers, and to select appropriate filters and targets for prehospital data analysis. The Committee meets regularly for case presentation and review of system data.

Clark County, because of efforts by its MPD, has a robust QA&I process. The MPD in Clark County works under a contract with agencies in the County, which permits him to employ a staff necessary to collect and examine data on system performance. Agencies in other parts of the Region equate QA&I with chart reviews and complaint resolution and engage in chart review with MPDs. In partnership with the Regional Quality Assurance and Improvement Committee, the Region is attempting to educate providers in the necessity of excellent data for effective quality measurement and improvement.

The Region is attempting to suggest a broader definition of QA&I that includes the development of system targets for performance and the measurement of system performance against these targets. Clearly, in excellent EMS systems, all personnel are engaged in QA&I. The lack of adequate prehospital data makes it difficult to describe the behavior of the system and its components.

2. Goal

Goal 1: A system of designated trauma care services and trauma rehabilitation services that meets the Southwest Region's the performance standards in the trauma plan.

Objective #1.
Use the Regional QI Committee to monitor system effectiveness and report needs to the Regional Council for system planning.

*Submitted by:*_____   *Date*_____

Attachment A

Southwest Region PCPs and COPs

2002-2003

Patient Care Procedures

Adopted November 6, 2002

Southwest Region EMS and Trauma Care Council

SW Region Prehospital Trauma System Activation & Destination Procedures

These procedures are based on the triage/assessment of the trauma patient using the State of Washington Prehospital Trauma Triage Destination Procedures (see p. 16).

Airway is of primary concern! If the patient's airway <u>cannot</u> be effectively managed consider rendezvous with ALS or immediate diversion to closest facility able to provide definitive airway management.

Step I   <u>**Assess Vital Signs and Level of Consciousness:**</u>
If any criteria met:
- Immediately notify the highest level trauma center within 30 minute transport time that your patient meets *Trauma Team* criteria and begin transport.
- If facility cannot accept your patient (i.e. on divert) immediately divert to the next closest, highest level trauma center. Notify receiving facility that your patient meets *Trauma Team* criteria.

Step II   <u>**Assess Anatomy of Injury:**</u>
If any criteria met:
- Immediately notify the highest level trauma center within 30 minute transport time that your patient meets *Trauma Team* criteria and begin transport.
- If facility cannot accept your patient (i.e. on divert) immediately divert to the next closest, highest level trauma center. Notify receiving facility that your patient meets *Trauma Team* criteria.

Step III   <u>**Assess Biomechanics of Injury and Other Risk Factors:**</u>
If any criteria met:
- Immediately notify the closest trauma center that your patient meets *Trauma Alert* criteria and begin transport.
- If facility cannot accept your patient (i.e. on divert) immediately divert to the next closest, highest level trauma center. Notify receiving facility that your patient meets *Trauma Alert* criteria.
- Special considerations:
    - If, during the course of your treatment and evaluation, the patient meets Vital Signs and LOC or Anatomy criteria, upgrade patient to *Trauma <u>Team</u>* status and proceed per Step I or II as above.
    - Always err on the side of patient care. If in doubt, assume injuries are of a critical nature and transport the patient to the highest level trauma center.

For all Trauma Team and Trauma Alert Patients:
- Affix the State of Washington Trauma ID Band to the patient, document the number and submit data (after the incident) to the State.
- Consider activation of an Air Ambulance if it will decrease total out of hospital time to the trauma center by 10 minutes or more.
- If in doubt regarding destination decision, follow local on or off line Medical Control.

DEFINITIONS

"Aid Vehicle" Means a first response, non-transport vehicle that meets the Washington Administrative Code (WAC 246-976) and in the Southwest Region, one that provides first response emergency medical services on a 24 hour per day, seven day per week period and is recognized as a resource in the Regional EMS and Trauma Plan.

"Ambulance" Means a transport vehicle that meets the Washington Administrative Code (WACs 246-976) for ill and injured patients, and in the Southwest Region, one that provides emergency medical services on a 24 hour per day, seven day per week period, and is recognized as a resource in the Regional EMS and Trauma Plan.

"EMD" Means provision of special procedures and trained personnel to ensure the efficient handling of medical emergencies and dispatch of aid. It includes pre arrival instructions for CPR and other verbal aid to callers. (from WAC)

"Global Positioning System (GPS)" means a satellite based location system for accurately determining the exact latitude and longitude of a particular point on the Earth's surface.

"Major Trauma Patient" Means a patient who meets the Washington State Prehospital Trauma Triage Tool's Step 1 or 2 (physiologic or anatomic) criteria for potentially life threatening injuries.

"Medical control" means the on-line and/or off-line direction (protocols) of prehospital EMS providers provided by MPD'S and/or MPD approved physician delegates.

"Patient Care Procedures Standard" Means the expectation set on a regional or statewide basis by which the system will be evaluated.

Patient Care Procedures Purpose" Defines why a procedure covering an area of the EMS and Trauma Care System is necessary.

"Patient Care Procedure means written operating guidelines adopted by the regional emergency medical services and trauma care council in accordance with state-wide minimum standards. The patient care procedures shall identify the level of medical care personnel to be dispatched to an emergency scene, procedures for triage of patients, the level of trauma care facility to first receive the patient, and the name and location of other trauma care facilities to receive the patient should an interfacility transfer be necessary, and includes a description of the activation of the trauma system.

"Patient Care Protocols" Mean standard medical orders developed and adopted by a county Medical Program Director that indicate the type of care to be provided to medical and trauma patients.

"Pediatric Major Trauma Patient" Means a patient who is a major trauma patient estimated to be under the age of 15 years.

"Quality Improvement" Means the process or methodology used to evaluate the effectiveness of the procedure on the system and recommend changes in the implementation process of the Regional Plan and in this procedure as may be indicated.

Trauma Alert criteria: used for activating the SW Region Trauma System that indicates patient severity. Generally denotes patient meeting Biomechanics of Injury and other Risk Factors (Step III) criteria in the SW Region Prehospital Trauma System Activation and Destination Procedures.

Trauma Team criteria: used for activating the SW Region Trauma System that indicates patient severity. Generally denotes patient meeting Vital Signs/Level of Consciousness (Step I) and/or Anatomy of Injury (Step II) criteria in the SW Region Prehospital Trauma System Activation Destination Procedures.

"Trauma Verified Service: means a DOH approved, and regionally recommended, first response or ambulance service that provides twenty-four hour per day emergency medical responses, seven days per week, with response ambulances and/or first response vehicles with personnel trained in emergency care of the traumatically injured patient.

DESIGNATED TRAUMA CENTERS - Southwest Region

In the Southwest Region, the following hospitals are Washington designated Trauma
Centers:

Southwest Washington Medical Center, Medical Center Campus, Vancouver, Washington -- Level II*
St. John Medical Center, Longview, WA -- Level III
Skyline Hospital, White Salmon, WA -- Level IV
Klickitat Valley Hospital, Goldendale, WA -- Level IV
Ocean Beach Hospital, Ilwaco, WA -- Level IV

(Level I is the highest level of designated Trauma Center in the Regional Trauma System, with in-house trauma care available, 24 hours per day. Southwest Washington recognizes Levels I, II, III, IV, and V. A Level V trauma center can provide the least technical care and should be considered as stabilization center only, with the intent of getting a major trauma patient from a Level III, IV or V trauma Center to a Level I or Level II Trauma Center as quickly as the patient is stabilized or is ordered transferred by the lower level designated Trauma Center's medical staff).

In The Southwest Region, the following level I, III and IV hospitals in Oregon and Washington are recognized as trauma resource hospitals for the Region.

- Providence Hospital	Yakima	Level IV
- Yakima Memorial	Yakima	Level III
- Legacy Emanuel Hospital and Health Center	Portland	Level I
- Oregon Health Sciences University	Portland	Level I
- Columbia Memorial Hospital	Astoria	Level III
- Hood River Memorial Hospital	Hood River	Level III
- Mid-Columbia Medical Center	The Dalles	Level III

PREHOSPITAL PROCEDURES

When a prehospital trauma verified service has identified a patient as a "major" trauma patient, the prehospital service should ensure the following:

1. Contact with Medical Resource Hospital (University Hospital, Portland, OR) for Level I access or the Level II Trauma Designated Trauma Center (Southwest Washington Medical Center), where available; or

2. The highest level of designated facility within the agency's immediate response jurisdiction if a Level I or Level II Trauma Center is not within a 30 minute response time. Contact by radio, cellular phone, telephone, or other means as conditions dictate.

When a non trauma verified prehospital service has contact with a major trauma patient prior to the arrival or dispatch of trauma verified service(s) they shall ensure that:

♦   The appropriate 9-1-1 dispatch center is immediately notified so that trauma verified services can be activated as per the dispatch system for that location.

ACTIVATING THE TRAUMA SYSTEM

Contact

To activate the Trauma System in the Southwest Region, contact with a the appropriate designated Trauma Center shall be preceded with the phrase: "THIS IS A TRAUMA SYSTEM ENTRY." this alerts the trauma center that you have a potential 'major' trauma patient.

It is important for the EMS agency to provide the designated Trauma Center with the following information:

A.   Identification of the EMS agency or Trauma Verified Service
B.   Patient's chief complaint(s) or problem: identification of biomechanics and anatomy of injury.
C.   Approximate age of the patient
D.   Basic vital signs (palpable pulse rate, where pulse was palpated, and rate of respiration).
E.   Level of consciousness (Glasgow Coma Score)
F.   Other factors that require consultation with the base station.
G.   Number of patients (if known)
H.   Estimated Time of Arrival
I.   Whether an air ambulance has been activated for scene, field, or hospital rendezvous.

MAJOR TRAUMA PATIENTS

When it has been determined that a patient meets the trauma inclusion criteria an orange Washington State Trauma Registry band should be attached to the patient's wrist or ankle as soon as possible. The number on the Trauma Registry Band shall be recorded on the medical incident report (by all prehospital agencies -- both first response and transport agencies) and in the hospital trauma registry database (by the Trauma Registrar at the hospital).

AIR AMBULANCE

Air ambulance shall be considered for use by prehospital agencies in the Southwest Region for major trauma patients when transport by air will reduce the overall out of hospital time to the most appropriate designated trauma center by 10 minutes or more. If the air ambulance is required, request 9-1 -1 or your dispatch services to "ACTIVATE AIR AMBULANCE FOR A TRAUMA SYSTEM ENTRY." If you have Global Positioning System coordinates of your location, give these to your 9-1-1 Center and/or Dispatch Services so that they may relay them to the Air Ambulance Service. If you begin ground transport of the patient for rendezvous

with an air ambulance service, notify the service of your intent to meet them at a location. Again, if the GPS of the rendezvous is known, give that location to the 9-1-1 center or dispatch service for relay to the air ambulance service.

It is highly recommended that all EMS services have predesignated rendezvous sights within their county and GPS coordinates for each sight should be identified in advance. These GPS coordinates should be placed on a map inside each trauma verified vehicle that will respond to a major trauma patient. These maps should be readily available to each first responder, EMT, or paramedic using the vehicle.

PROLONGED TRANSPORT

When the transport of an major trauma will be greater than 30 minutes to a Level I or II Trauma Center but within 30 minutes of an lesser level facility, the highest level EMS provider on the scene should immediately contact on line medical control and request instructions as to whether the patient should be transported to a Level V, IV, or III center for stabilization or whether they should be transported directly to a Level I or Level II Trauma Center.

All information on "major" trauma patients shall be documented according to WAC and County Medical Program Director guidelines.

While enroute to the receiving facility, the transporting agency should provide a complete report to the receiving trauma center regarding the patient's status, and provide them with any further information that may be needed, including estimated time of arrival to their facility.

PEDIATRIC MAJOR TRAUMA PATIENTS

For a pediatric major trauma patient consideration should be given to transport the patient directly from the field (either by air ambulance or ground ambulance -- see above, Air Ambulance for guidance) to the most appropriate (Level I, II, III) trauma facility within the Region. In most cases, a pediatric major trauma patient will be transported to a Level I Trauma Center. However, Level II and /or Level III Centers, may offer initial stabilization of the pediatric patient. All level Trauma Centers in the Southwest Region shall follow their guidelines for diversion of pediatric patients directly from the prehospital setting based on the availability and potential need for surgical or medical subspecialty care or resources specific to the care of the pediatric patient. When a prehospital service notifies a Trauma Center that they have a major pediatric trauma patient, the Level II, III, IV, or V center should immediately notify the trauma designated EMS agencies of the diversion policy.

DIVERSION – TRAUMA CENTER(s) NOT ACCEPTING PATIENTS

Designated Trauma Centers in the Region will go on diversion for receiving major trauma patients based on the facilities' inability to provide initial resuscitation, diagnostic procedures, and/or operative intervention at the designated level of care.

Diversion will be categorized as partial or total based on the inability of the facility to manage specific types of major trauma or all ma or trauma at the time.

Trauma Centers shall consider diversion of major trauma patients when:

I.   A Surgeon is unavailable
2.   The OR is unavailable
3.   The CT scanner is down (if Level II)
4.   Neurosurgeon is unavailable if (Level II)
5.   Emergency Department is unable to manage more major trauma; and/or
6.   Other specific resources needed for care of a trauma patient are unavailable

> Each designated Trauma Center will have a hospital-approved policy to divert patients to other designated facilities based on its ability to-manage each patient at a particular time. A diversion log will be kept, indicating the time of diversion and the reason for partial or total diversion.

EMS agencies in the Southwest Region will be notified if and when a Trauma Center is on diversion status. Trauma verified services will follow their medical program director's guidelines on where trauma patients should be taken, in the event the closest or most appropriate trauma center is not accepting patients.

MPDs should develop diversion protocols for their respective counties.

MEDICAL PATIENTS

All EMS Agencies should follow their Medical Program Director's patient care protocols and/or guidelines for the care and transport of medical and non-major trauma patients. If it is unclear as to where a medical or non-major trauma patient should be transported, contact medical control at your nearest resource hospital for directions; otherwise follow off-line medical control of patients as outlined in your standing orders, patient care protocols, and/or guidelines provided by your Medical Program Director.

MPDs, in the development of their patient care protocols and/or guidelines for the care and transport of the medical and non-major trauma patient, shall consider:

A.   Patient's desire or choice of medical facility as to where they want to be transported and/or treated. Or, in the case of a unconscious patient, the wishes of the patient's family or personal physician.

B.   The type of treatment and the ability of a receiving hospital to treat such medical or non-major trauma (i.e., high risk OB patients, potential ICU/CCU patients, unstable co-morbid medical patients, etc.).

C.   Pre-existing financial or organizational agreements with receiving facilities (i.e., HMO members, capitated arrangements, or referral patterns previously established).

D.   Level, severity, and type of injuries.

E.   Ability of the receiving hospital to adequately treat the medical or non-major trauma patient.

In all cases, unless proper medical care dictates otherwise, the choice of the patient is paramount in the development of standing orders, patient care protocols, and/or guidelines for EMS transport agencies.

QUALITY ASSESSMENT AND IMPROVEMENT (QA&I)

Quality Assessment & Improvement (QA&I) is an integral component of the Southwest Region's Trauma System. For all patients, EMS and health care providers will follow their agency's specific QA&I plan. If an agency does not have a QA&I Plan, one should be developed and adopted. Issues that are deemed by the QA& I committee board for their review and recommendations should be submitted directly to the regional QA&I committee for consideration. QA&I prehospital problems, issues, case reviews, areas of improvement, can be "flagged" by checking the "QI" Box on the medical incident reporting form, available from the State EMS Office. Any system issues that affect patient care are encouraged to be submitted. Refer to SW Region QA&I plan for more information regarding QA&I for the region.

PATIENT CARE PROCEDURES - DISPATCH AND RESPONSE TIMES

STANDARD: DISPATCH

Dispatchers who operate a 9-1-1 Center in the Southwest Region should use a regionally approved medical priority dispatch program available from the Southwest Region EMS & Trauma Care Council. All dispatchers should be trained in a regionally adopted and medical program director approved emergency medial dispatch program (EMD) and be regionally certified as EMDs. Such persons who are not certified should be in a sixteen-hour in-house training program that provides them with the principles of EMD dispatch. EMDs should follow priority dispatch for major trauma patients.

EMDs should use the priority dispatch guidelines when dealing with a major trauma patient.

LEVEL OF SERVICE TO BE DISPATCHED

When a 9-1-1 Center receives a call that suggests to the emergency medical dispatcher (EMD) that a "major" trauma patient is involved, the EMD should dispatch the highest level of care that is generally available in the response area. First response trauma verified services, where available, should also be dispatched. In all counties in the Southwest Region, paramedics or the highest level of provider, specifically trained in prehospital trauma life support should be dispatched to the scene of a major trauma incident, when available.

The 9-1-1 Center should immediately notify both the first response service and the transport service that this is "a potential 'major' trauma patient response." It is the responsibility of the responding agency to have the appropriate trained prehospital trauma life support medical technicians respond to the scene. If prehospital agencies do not have resources available who are trained in prehospital trauma life support, the agency should immediately notify the 9-1-1 Center to dispatch a trauma verified service to the scene of the call to assist with the patient or patient(s). In all suspected "major" trauma patients, the nearest and highest level of EMS provider should be dispatched as part of the initial EMS response to any trauma patient. Ideally, this would be a paramedic service with trauma trained individuals on board.

DISPATCH OF NEAREST TRAUMA VERIFIED SERVICE

Response Systems

County 9-1-1 Centers should develop response systems to determine which nearest trauma /trauma verified first response and transport service should be dispatched to the scene of a major trauma incident or patient.

For all "major" trauma patients or 'suspected' major trauma patients, emergency dispatch agencies or 9-1-1 Centers shall dispatch trauma verified service(s) to the scene of the trauma incident in accordance with the dispatch system and compatibility of service providers.

In the instance where no trauma verified service is available, the 9-1-1 Center should dispatch the nearest available first response and/or ambulance service to the scene of the trauma incident with the highest level of care available.

If in doubt as to whether the incident being reported to the 9-1-1 Center involves a "major trauma patient, " until notified otherwise by a paramedic or the highest level EMS provider on the scene, ASSUME THE INCIDENT INVOLVES A MAJOR TRAUMA PATIENT and dispatch according to this section of the Region's Patient Care Procedures. Remember that time is of the essence for major trauma patients.

RESPONSE MODE

If a major trauma patient is known or suspected, 9-1-1 Centers should advise all responding trauma services of any and all additional information that becomes available to the 9-1-1 center.

RESPONSE TIMES

To ensure timeliness in the dispatch of a trauma verified service, the following guidelines have been adopted by the Regional Council for response times (measured from the time the call is received by the responding agency until the time the agency arrives on the scene of the trauma incident):

First Response Trauma Verified Services (response times, 80 percent target)

Urban Areas: 4 minutes
Suburban Areas: 5 minutes
Rural: 12 minutes
Wilderness: within 60 minutes, but as soon as possible.

Transport Trauma Verified Services (response times, 80 percent target)

Urban Areas 8 minutes
Suburban Areas 15 minutes
Rural 35 minutes
Wilderness: within 60 minutes, but as soon as possible.

These response times apply to all trauma verified services in the Southwest Region, and apply to all major trauma patients.

INTERFACILITY TRANSFER/TRANSFER AGREEMENTS

All Level II (Southwest Washington Medical Center, Medical Center Campus,
    Vancouver), Level III (St. John Medical Center, Longview), IV (Ocean Beach
    Hospital, Ilwaco, WA; Skyline Hospital, White Salmon; and Klickitat Valley
    Hospital, Goldendale, WA), and Level V (none at present) designated trauma
    facilities shall have transfer agreements with Level I Trauma Centers (Emanuel
    Hospital and/or University Hospital) for the transfer of emergency medical and
    trauma patients, as necessary. Identification of patients who meet trauma transfer
    criteria shall be according to the Washington State recommended guidelines for
    Adult & Pediatric Trauma Transfer Criteria (See Appendix A)

All Interfacility transfers shall be in compliance with current EMTLA regulations and
    must be consistent with the Revised Codes of Washington (70.170.060(2).

All Interfacility transfers of major trauma patients shall consider an air ambulance service
    where out of hospital times can be reduced by 10 minutes or more, or an
    appropriate level of trauma verified transport service (where transport can be
    appropriately handled by such a ground service (i.e., Southwest Washington
    Medical Center to University Hospital, for example), in all other cases.

PROCEDURES

Designated Trauma Centers shall have published adult and pediatric trauma transfer
    criteria available for use by the emergency department personnel (Appendix A).

INTERFACILITY TRANSFER OF A MAJOR TRAUMA PATIENT

When a major trauma patient must be transferred from a lower level Trauma Center to a
    higher level center (Level IV to Level I, for example), the transferring physician
    must contact the receiving physician who must accept the transfer of the patient
    prior to the patient leaving the sending facility.

The transferring physician and facility will ensure the appropriate level of care during
    transport of the major trauma patient to the receiving Trauma Center.

The receiving facility must accept or be available to accept the major trauma patient prior
    the patient leaving the sending facility.

The receiving facility will be given the following information on the patient by fax,
    phone, or other appropriate means:

    a. Brief History
    b. Pertinent physical findings
    c. Summary of any treatment done prior to the transfer
    d. Response to therapy and current condition

All appropriate documentation must be available at the receiving facility upon arrival of the patient to the receiving facility (it may be sent with the patient, faxed to the hospital, or relayed by other appropriate means).

The transferring physician's orders shall be followed during transport. Should the patient's condition change during transport. the pre-determined on-line or off-line medical control for the transporting agency shall be utilized.

Further orders may be given by the receiving physician.

> MPD approved, or County protocols should be followed during transport, unless direct medical orders by the sending or receiving physician are given to the contrary.

All ground Interfacility transports must be conducted by a trauma-verified service for trauma system patients.

APPENDIX A - INTERFACILITY TRANSFER CRITERIA

All designated health care facilities shall have transfer agreements for the identification and transfer of trauma patients as medically necessary.

General Trauma Transfer Criteria

Patients from the following categories are at high risk for death or disability and shall be considered for transfer to a facility designated to provide Level I or Level II Trauma Care Services.

A. Central Nervous System

    1. Head injury with (any I of the following):
        (a) Open, penetrating, or depressed skull fracture
        (b) CSF leak
        (c) Severe coma (9GCS< 10)
        (d) Deterioration in GCS of 2 or more
        (e) Lateralizing signs

    2. Unstable spine
    3. Spinal cord injury (any level)

B. Chest
    1. Suspected great vessel or cardiac injuries
    2. Major chest wall injury
    3. Patients who may require protracted ventilation

C. Pelvis
    1. Pelvic ring disruption requiring transfusions
    2. Evidence of continued hemorrhage
    3. Compound/open pelvic injury or pelvic visceral injury

D. Multiple system injury
    1. Severe facial injury with head injury
    2. Chest injury with head injury
    3. Abdominal injury with head injury
    4. Bums with head injury

E. Specialized Problems

    1. Critical burns>20% of body surface areas or involving airway;

F. Secondary Deterioration (late sequelae)

    1.   Patient requires mechanical ventilation
    2.   Sepsis
    3.   Organ system(s) failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal, or coagulation systems)
    4.   Osteomyelitis

Pediatric Trauma Transfer Guidelines

(Adopted by the Governor's EMS & Trauma Care Steering Committee on July 19, 1995)

Consideration shall be given to early transfer of a child to the regional pediatric trauma center when required surgical or medical subspecialty care or resources are unavailable. These include, but are not limited to the following:

1.   Hemodynamically stable children with documented visceral injury being considered for "observational" management. Although the efficacy of this approach in selected cases has been well documented, two significant caveats always apply:

    a)   Hemodynamic instability mandates immediate operative intervention, and;
    b)   Nonoperative care is safe only in an environment that provides both close clinical observation by a surgeon experienced in the management of childhood trauma and immediately available operative care.

2.   Children with abnormal mental status. In all but the infant, outcome from closed head injury has been shown to be significantly better for the child than for the adult. Although the quality and timeliness of initial resuscitation are the most important determinants of outcome from brain injury, continued comprehensive management in specialized units with multi-disciplinary pediatric critical care teams may provide a more rapid and complete recovery.

3.   Infants and small children. Severely injured infants and small children are the most vulnerable and, frequently, the least stable trauma victims. Because they require the special resources and environment of a regional pediatric Trauma Center, transfer should occur as soon as safely feasible.

4.   Children with injuries requiring complex or extensive reconstruction. These services are traditionally most available in hospitals capable of functioning as a regional pediatric trauma center. It is especially important that children with impairments requiring long-term follow-up and supportive care have this provided or at least coordinated by the regional pediatric Trauma Center. Longitudinal follow-up of injury-related disability is an essential requirement of the regional pediatric Trauma Center's trauma registry.

5. Children with polysystem trauma requiring organ system support. This is especially important for those patients requiring ventilatory, cardiovascular, renal, or nutritional support. Because these problems usually occur synchronously and require precise interdisciplinary coordination, they are best managed in comprehensive facilities such as regional pediatric Trauma Centers.

STATE OF WASHINGTON
PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURES
EFFECTIVE DATE 1/95

- Prehospital triage is based on the following 3 steps: **Steps 1 and 2 require prehospital EMS personnel to notify medical control and activate the Trauma System. Activation of the Trauma System in Step 3 is determined by medical control**

STEP 1
ASSESS VITAL SIGNS & LEVEL OF CONSCIOUSNESS

- Systolic BP <90*
- HR >120*
  * for pediatric (<15y) pts. use BP <90 or capillary refill >2 sec.
  * for pediatric (<15y) pts. use HR <60 or >120
Any of the above vital signs associated with signs and symptoms of shock
                              and/or
- Respiratory Rate <10 >29 associated with evidence of distress
                              and/or
- Altered mental status

YES →

1. Take patient to the highest level trauma center within 30 minutes transport time via ground or air transport according to DOH approved regional patient care procedures.

2. Apply "Trauma ID Band" to patient.

If prehospital personnel are unable to effectively manage airway, consider rendezvous with ALS, or intermediate stop at nearest facility capable of immediate definitive airway management.

NO ↓

STEP 2
ASSESS ANATOMY OF INJURY

- Penetrating injury of head, neck, torso, groin; OR
- Combination of burns ≥ 20% or involving face or airway; OR
- Amputation above wrist or ankle; OR
- Spinal cord injury; OR
- Flail chest; OR
- Two or more obvious proximal long bone fractures.

YES →

NO ↓

STEP 3
ASSESS BIOMECHANICS OF INJURY AND OTHER RISK FACTORS

- Death of same car occupant; OR
- Ejection of patient from enclosed vehicle; OR
- Falls ≥ 20 feet; OR
- Pedestrian hit at ≥ 20 mph or thrown 15 feet
- High energy transfer situation
      Rollover
      Motorcycle, ATV, bicycle accident
      Extrication time of > 20 minutes
- Extremes of age <15 >60
- Hostile environment (extremes of heat or cold)
- Medical illness (such as COPD, CHF, renal failure, etc.)
- Second/third trimester pregnancy
- Gut feeling of medic

YES →

CONTACT MEDICAL CONTROL FOR DESTINATION DECISION

YES →

1. Take patient to the highest level trauma center within 30 minutes transport time via ground or air transport according to DOH approved regional patient care procedures.

2. Apply "Trauma ID Band" to patient

NO ↓

NO ↓

Appendix 1
Southwest Region EMS & Trauma Care Council
County Operating Procedures (COPs)

Wahkiakum County
Cowlitz County

Wahkiakum County EMS & Trauma Care Council

County Operating Procedure

No. 1

Subject: Automatic Dispatch of Adjacent Service

If within (5) minutes of initial dispatch, there is no response from the agency with primary jurisdiction, then dispatch shall re-tone the primary jurisdiction and shall also automatically dispatch the next closest licensed EMS agency in Wahkiakum County. "Response" means verification that a full crew is en route to the station or the EMS vehicle is en route from the station with appropriate crew en route to the scene.

Wahkiakum County EMS & Trauma Care Council

County Operating Procedure

No. 2

Subject: Verification of paramedic response

For the following types of calls, dispatch shall verify a paramedic response:

1. Motor Vehicle Collision involving more than one vehicle.

2. Vehicle/pedestrian or vehicle/bicycle collision.

3. Any call where the patient is unconscious and/or not breathing.

4. Any call where the patient is known to be experiencing anaphylaxis or hypoglycemia.

5. Any call where the patient is 45 years of age or older and is experiencing chest pain.

6. Any call where the patient is experiencing respiratory distress and is exhibiting an altered level of consciousness.

7. Any gunshot wound.

If the primary jurisdiction does not have a paramedic available, dispatch shall automatically dispatch a paramedic from the nearest available agency.

Attachment B

Service Area Maps

Contact the Regional Office for hard copies of this attachment

ATTACHMENT I

DOH Criteria for
Identifying
Need & Distribution

Purpose:
Assure adequate availability and avoid inefficient duplication and lack of coordination of prehospital services within the region.

Regional Plan planning process shall include:
Regional EMS/TC councils identify the need for and recommend distribution and level of care (basic, intermediate or advanced life support) for verified aid and ambulance services for each response area identified in the plan.

WAC Criteria:
- Agency response times
- Geography
- Topography and
- Population density.

Other WAC Requirements to be considered:
- Skill Maintenance

System influences to consider:
- Tiered Response
- Dispatch Procedures

Regional Analysis should consider agency response times:
- The ability of agencies to meet state verification response time standards as defined in WAC.

Regional Analysis could also consider:
- National standards for Cardiac response is 4 minutes for BLS and 8 minutes for ALS
- 8-minute response time in an urban system is acceptable and could be factored into determining the number of units a community will require.[1]
- In less populated or rural areas, longer response time may need to be accepted, "although Optimal response times are nonetheless Desirable." [1]

Geography and Topography:
- Distances between services and road mileage to incidents
- Proximity to Verified ILS or ALS services.
- Mountain, terrain and water barriers to the efficient response to parts of the populated areas.

Population & Population Density:
- National Data Studies
  - 1 ALS Agency per 40,000 population
  - 1 emergency transport per day per 7,000 – 10,000 population[1,2]
  - Emergency transports per year = 3.5% of population[1,2]
  - 20 – 30% of all 911 calls will require paramedic skills[3]

- Tourism influence[2]
- 65+ Population[2]
- Economic Variables of the population[2]
- *Example:* A community in the 25th percentile of median income would be expected to experience 103 more responses than a community of similar size in the 75th percentile of median income.

Skill Maintenance:
- WAC Requirement -

Initial Certification Period	Recertification
IVs – 36 per year	Demonstrated Proficiency
ETs – 12 per year	4 per year

- National Recommendations -
  - ACEP – 2.4 to 8.9 ETs per year. [4]

Region must consider:
- Can IV skill maintenance be achieved within the prehospital responses?
- Can ET skill maintenance be met within the community or will other opportunities for personnel to maintain skills be required?

Other Impacts to be addressed:
- Tiered Response
  - Article review finds most recommendations are for a 2 or 3 tiered response
  - Does the Region have a PCP for Tiered Response and/or Rendezvous?
- Dispatch Protocols:
  - National Recommendations for dispatch:
    - Single separate entity not associated with providers
    - Priority Dispatch Protocols and System Status Management[3]
    - Optimal Deployment Management[5]

REFERENCES
1 Roush, William, MD: *Principles of EMS Systems*
2 Cadigan, Robert T., PhD, Burgarin, Carol E. MD: Predicting Demand for Emergency Ambulance Service, *Annals of Emergency Medicine, June 6, 1989*
3 Cadigan, Robert T., PhD, Burgarin, Carol E. MD: Predicting Demand for Emergency Ambulance Service, *Annals of Emergency Medicine, June 6, 1989*
4 O'Connor, MD, Clarke, et.al: Endotracheal Intubations Field Experience: Is there a minimum Amount Required for Paramedics to Maintain Proficiency? *National Association of Emergency Medical Services Physicians, June 1995.*
5 Fitch, J.J. PhD: *EMS Management Beyond the Street, 1993*

ATTACHMENT II

DOH Criteria for Establishing
Number and Level
of
Designated Facilities

Purpose:
Establish the number and level of facilities to be designated, which are consistent with state standards and based upon availability of resources and distribution of trauma within the region.

Regional Plan planning process shall include RCW Criteria
- Resources
- Distribution of trauma

Regional Analysis should consider DOH Criteria
- Population demographics (density, growth, etc.)
- Trauma patient volumes (current and forecasted)
- Trauma patient acuity
- Available resources/capabilities
- Geographic constraints/issues
- Patient flow patterns
- Market share/use rates

Regional Analysis should also consider
- Balancing access with quality of care and cost.
- Data sources available are:
  o Trauma Registry
  o CHARS
  o Death records

(DOH Staff are available to help any region that is interested in reviewing relevant data in the min/max planning process)